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FRANK M. CHAPMAN

Official Organ of the Audubon Societies

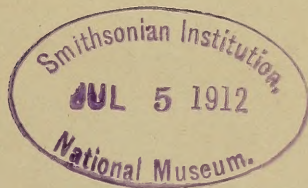
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MABEL OSGOOD WRIGHT

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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XI

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No. 1

The Hollow Tree

By ERNEST THOMPSON SETON

MOST naturalists realize at once that a hollow tree in some sort is essential to the existence of about one-fifth of our birds and one-fourth of our beasts; that, therefore, the disappearance of our old forest trees combined with the well-meant but zoologically mischievous efforts of the modern tree-surgeon is actually threatening to exterminate many of our most highly prized creatures of the woods.

Since I came into possession of Wyndygoul Park, nine years ago, many old, hollow trees there have fallen in ruins, without any others in sight to promise an asylum for the tenants.

One day the sinister form of a tree-surgeon appeared at the gates, and, unblushingly, he offered for a consideration to complete the work of extermination. After I had got rid of him and carefully removed all the telltale traces of the affair, I realized that it was my bounden duty to supply the wood creatures with some adequate hollow trees. Of course, I could offer, and had for long been supplying nesting-boxes, which increased experience taught me to make more and more like natural limbs and knot-holes. But these were for individuals of small species; they were mere shanties of refuge. I was now ambitious to build a veritable cathedral—or rather a modern apartment house; a sky scraper; a city in itself.

I began by selecting an island (since I preferred birds and bats to beasts) and on that reared six forty-foot telegraph poles so as to enclose a seven-foot circle at the bottom and three-foot circle at the top. Each pole was braced four ways with heavy chestnut timbers, then the structure buried seven feet deep in stonework, and finally covered in with slabs, on which the bark was carefully saved. A good roof, a series of ladders and stories inside, with many nesting-boxes opening outside, completed the tree.

The advantages of this structure over many scattered boxes are: *First*, for observation—I can watch from peep-holes the behavior of every occupant with little trouble and without my presence being suspected.

Second: I have absolute control. I can remove an obnoxious red squirrel or rat, and I can easily suppress the curse of box-nesters—the insect vermin. A



THE HOLLOW TREE

little sulphur, etc., in each nest will do that. And, finally, I concentrate my material in one attractive, secluded, picturesque place.

Many of my friends were skeptical of the result, but already things are happening, although the tree was finished only in September and I scarcely looked for returns before June.

A Golden-winged Woodpecker took up his residence there before I was quite ready for him. The daily record of his food habits has been kept (through help of the Biological Survey) and some interesting facts obtained.

A Screech Owl dwelling in another box, has contributed two young rats that he must have got miles away, some grasshoppers, and a pine mouse (*M. pine-torum*) a new record for the region.

Nuthatches and deer mice are living in and about the tree at this moment, and once, at least, a coon found it a harbor of refuge. Thus it is already answering the ends of its creation and each month is producing some results to justify the tree.

(Written for BIRD-LORE by permission of the Editor of 'Country Life,' in which magazine the log of the tree is set forth each month.)



LOON GETTING UNDER WAY. NOTE THE POSITION OF THE FEET
Photographed by J. S. Perry, at Mud Lake, Victoria Co., N. B., August, 1908

The Feud of the Crows and the Owl

By FRANK M. CHAPMAN

With photographs by the author

NO one who is familiar with both the Crow and the Barred Owl will doubt for a moment the existence of a long-standing feud between these two birds. Just why the Crow should cherish so intense an animosity against the Owl I have never been able to understand, but certain it is that if, when within hearing of Crows, I give utterance to the *Whoo-whoo-whoo, too-whoo, too-whoo-ah*, there is invariably a response. Whatever this call may mean to the Owl, to the Crows it is evidently a challenge to combat, and before its echoes have died away one hears the sharp *caw-caw*, which is unmistakably a rally-call of the bird in black, and is immediately repeated by every bird that hears it.

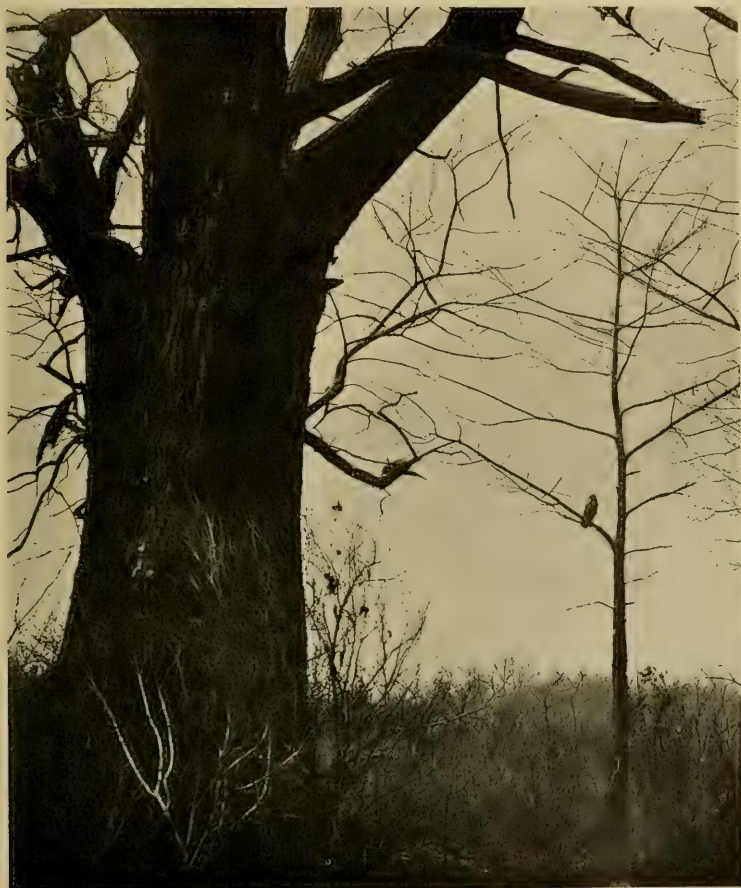
A single utterance of the Owl's note is often sufficient to arouse the Crows, and in a surprisingly short time one has a throng of eager, inquisitive cawing birds overhead, which have located the supposed Owl with unerring certainty.

On many occasions, even at mid-day, my imitation of the Owl's call has brought an Owl from retirement with most disastrous results. Although these birds can see far better in bright light than is generally supposed, they are no match for the keener-eyed, more agile Crows, and my attempts to deceive the Crows has, I am sorry to say, placed more than one Owl in an exceedingly unpleasant position as he has found himself surrounded on all sides by a black-coated mob.

Some years ago I decided to take advantage of this universal hatred of Owls, in order to secure photographs of Crows, which are usually so wary that they prove difficult game for the bird photographer. I therefore borrowed from the American Museum of Natural History, a mounted Barred Owl and placed it within twenty feet of a hollow chestnut tree. This tree, an old landmark, was a mere shell some twenty-five feet in circumference with a hollow nearly eight feet in diameter. On several occasions I have used it as a camp in which to pass the night, and long before I thought of employing the camera in the study of birds, it had served admirably as a natural blind from the concealment of which birds might readily be observed.

The lens of my camera was pointed through a knot-hole, favorably situated on the side of the tree facing the mounted Owl, and, after having made all necessary arrangements as to focus, etc., I placed my mouth at another knot-hole and gave utterance to the call of the Barred Owl. Within a moment or two the expected response came from a neighboring wood, and very shortly the usual throng of Crows had gathered at the part of the woods nearest to the tree in which I was concealed. From this point, however, the birds hesitated to make an advance into the open, either because their suspicions were aroused, or because they were not accustomed to find Owls so far from dense cover. For some time, therefore, they circled overhead in winged reconnaissance, until one of the birds actually

saw the mounted Owl in the tree below. Caution was at once abandoned and, uttering the battle-cry of his kind, he, with his fellows, advanced to the attack. A dozen or more of the birds took up positions in or near the tree in which the Owl sat so calmly, and screamed their notes of defiance almost in his unresponsive



WAITING FOR THE CROWS

face. But in spite of the fact that the dummy bird showed no signs of resentment or of attempt at defence, there appeared now to be considerable hesitation on the part of the Crows as to which one should actually strike the first blow. So far as voice alone was concerned, each one seemed to do his best to call louder than his fellow, and one could readily imagine that each bird was urging his neighbor to open the campaign.

This continued for some time until finally one of the Crows mustered sufficient courage actually to strike the Owl, and it was exceedingly interesting to

observe that the fraud was apparently detected in a moment. The calls of the Crows changed rapidly and, in an instant, every bird left the vicinity, and, cawing loudly, returned to the woods; nor did I succeed, in spite of the most alluring hoots, in inducing them to return to the attack.

A comparison of the action of these birds with those of Blue Jays under not dissimilar circumstances shows that the Crows grasped the situation more quickly. The Blue Jays returned, repeatedly striking a mounted Screech Owl, even when after the first onslaught, it hung by wires to the limb on which it had been fastened, the birds evidently not realizing that the Owl was a dummy. The Crows, on the other hand, although the first blow did not result in upsetting the Owl, seemed at once to understand that they had been imposed upon and lost no time in retreating.



"SCREAMED THEIR NOTES OF DEFIANCE ALMOST IN
HIS UNRESPONSIVE FACE"

Birds Seen in Prospect Park, Brooklyn, During 1908

By KATE P. and E. W. VIETOR

DURING 1908 we made 135 visits to Prospect Park in search of birds and found ninety-three species. During the summer most of the visits were made in the early morning; since October 1 they have been made between 9 and 11.30 A.M. and 2 and 5 P.M.

The birds nesting in the Park numbered twenty-two species. They were the Black-billed Cuckoo, Yellow-billed Cuckoo, Flicker, Downy Woodpecker, Chimney Swift, Ruby-throated Hummingbird, Crested Flycatcher, Wood Pewee, Crow, Starling, Grackle, Baltimore Oriole, Song Sparrow, Chipping Sparrow, Scarlet Tanager, Red-eyed Vireo, Warbling Vireo, Yellow Warbler, Catbird, House Wren, Wood Thrush and Robin.

As winter residents we found the Black-crowned Night Heron, Downy Woodpecker, Starling, White-throated Sparrow, Junco, Pine Siskin, Brown Creeper, Red-breasted Nuthatch and Chickadee; a total of nine species.

We can only claim the Downy Woodpecker and Starling as permanent residents.

The Song Sparrow and Robin were with us for eleven months, and the Carolina Wren, though heard several times during the winter, did not move into the park until July 4 with his family; since which time he has remained. The Purple Finches came into the park January 19, and stayed until May 10; with two exceptions they were always found feeding in Washington haws. This fall we saw them in the park from October 29 to November 13.

As migrants we found the Little Green Heron, Woodcock, Spotted Sandpiper, Solitary Sandpiper, Sparrow Hawk, Pigeon Hawk, Red-shouldered Hawk, Osprey, Belted Kingfisher, Red-headed Woodpecker, Yellow-bellied Sapsucker, Kingbird, Phoebe, Rusty Blackbird, Orchard Oriole, Field Sparrow, Fox Sparrow, Swamp Sparrow, White-crowned Sparrow, Goldfinch, Indigo Bunting, Rose-breasted Grosbeak, American Crossbill, Towhee, Tree Swallow, Cedar Waxwing, Blue-headed Vireo, Yellow-throated Vireo, Black-throated Blue Warbler, Black-throated Green Warbler, Blackpoll Warbler, Black and White Warbler, Blue-winged Warbler, Bay-breasted Warbler, Connecticut Warbler, Chestnut-sided Warbler, Cape May Warbler, Canadian Warbler, Hooded Warbler, Louisiana Water Thrush, Myrtle Warbler, Magnolia Warbler, Northern Water Thrush, Northern Yellow Throat, Ovenbird, Parula Warbler, Prairie Warbler, Redstart, Wilson's Warbler, Yellow Palm Warbler, Brown Thrasher, Winter Wren, Golden-crowned Kinglet, Ruby-crowned Kinglet, Hermit Thrush, Gray-cheeked Thrush, Olive-backed Thrush, Wilson's Thrush and Bluebird. Total, fifty-nine species.

The Night Hawk was seen twice during morning hours in the park.

Occasionally during the winter and fall, Herring Gulls were seen flying over above the tree-tops.

We have six dates that seem rather late for certain feathered folk to stay: Phoebe, November 5; Chipping Sparrow, November 13; Redstart, November 22; Northern Water-Thrush, November 30; Hermit Thrush, December 27, and Fox Sparrow, December 30.

The birds seen only once were the Rusty Blackbird, April 7; White-crowned Sparrow, May 12; Orchard Oriole, May 19; Connecticut Warbler, September 4; Red-headed Woodpecker, September 11; and Solitary Sandpiper, September 13.

Our first acquaintance with the Screech Owl was December 20 and he seems willing to stay.

NOTE—Mr. E. Fleischer of Brooklyn made 169 visits to the park during the year and reports the birds named above, excepting the White Crowned Sparrow, American Crossbill and Connecticut Warbler; but adds the Canada Goose, Turkey Vulture, Sharp-shinned Hawk, Marsh Hawk, Whippoorwill, Olive-sided Flycatcher, Yellow-bellied Flycatcher, Least Flycatcher, Blue Jay, Barn Swallow, White-eyed Vireo, Nashville Warbler and Pine Warbler. This makes a total of 106 species seen in Prospect Park during 1908.—E. W. V.

The Comradeship of Redpolls

By E. J. SAWYER

Illustrated by the author

THE tamability of the Redpoll seems to be pretty well known, and the confiding disposition of the bird in nature—one can hardly say, the wild state—is indeed too characteristic to escape the notice of the ordinary observer. A flock feeds beside the road just ahead of you, some of the dainty little fellows moving along in the wheel tracks a few yards away, others feeding among the tall weeds, all so close that you can not but stop repeatedly to enjoy their happy twittering and something so near to hand-shaking with a wild bird. Often I have had these birds perch on a rod I carried. On one occasion four of them sat on the pole the nearest being only four or five feet from my hands.

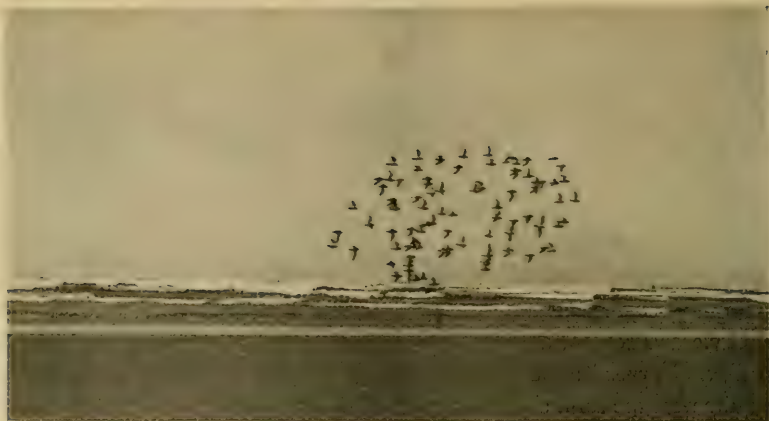
Perhaps you have never followed a flock from field to field, morning till sunset, day after day, and thus come to have a fellow feeling not otherwise possible. After such an experience two things will ever be associated in your mind with the dainty little Redpolls—their confidence in man and their fondness for each other's society. I know no other birds which seem quite so much to enjoy a gregarious life. When part of a flock flies up from the feeding-place the others at once change their usual notes to the call always given by solitary Redpolls. The flock then either circles about and returns, or is soon joined by the remaining birds. When one or two members of a flock are left alone they soon fly to the top of some nearby tree or tall bush and call pitifully for their mates. If a flock flies past in sight or hearing they are sure to join it with glad chirps always uttered on such an occasion.

These solitary birds will seldom stop to feed, but call and search continually

for their companions until these are found, when they again feed contentedly with the rest of the flock and the call-note is at once forgotten, the communal chirp taking its place. This may be observed many times in following a flock, even for a short period. Owing to the restless nature of the birds, and the close-growing weeds they haunt, one or a few of them very often fail to rise with the main body of the flock.

The canary-like call-notes of stray Redpolls may be closely imitated by whistling. I have called a single bird to a tree beside me time after time by thus imitating the call of a mate. He would fly nearly out of sight across the field, then circle and return, answering my whistle with a similar note as he twitched his tail, and peered about in my direction. He sometimes flew down in a low tree quite near me for a closer look; but he would soon be off again, only to return as before to the same tree when I whistled.





MIGRATING SHORE BIRDS

Notes on Pacific Coast Shore Birds

By JOHN TREADWELL NICHOLS

With photographs by the author

DURING a part of the fall migration season of 1908, the writer was doing work on and near our northern Pacific coast for the United States Bureau of Fisheries, and took much pleasure in the shore birds which were observable there from time to time.

South, from the mouth of the mighty Columbia river, is a stretch of sand beach which extends to the jutting rocks of Tillamook Head. This beach was visited July 26. Sandpipers and Plovers were here already, migrating southward from their northern breeding-grounds, as doubtless were their eastern congeners at the same time, along the shores of old Atlantic.

A Sanderling stood out large and pale among Western Sandpipers, which were gleaming along the beach close to the shifting wave-line. A lone Black-bellied Plover was in handsome plumage, with black underparts and a little Ring-neck Plover seemed indeed like a friend from home.

The big timber of the Pacific slope does not extend far to the east. Tall mountains shut off the moisture of the ocean, on which it is dependent, and eastern Washington is a dry, treeless country. About August 1, Crab Creek, a clear, cold trout brook, north of the town of Ritzville, Washington, was visited. The drive to the creek from Ritzville is across a rolling, dusty grain country, where one of the many races of Horned Lark was abundant. The rocky slope from upland down to the creek is cultivated, covered with a scanty mantle of rank, spicy, sage bush. A band of vegetation, grass, bushes, small trees, etc., clings close to the creek. Here was the eastern Kingbird, and at one point some American Magpies. Nighthawks were common, and frequently seen flying about in the bright desert sunshine, and Mourning Doves were much in evidence. Of shore birds, Killdeers were very prominent and noisy, a few Spotted Sand-

pipers bobbed along the edge of the brook, and on August 1, a single Solitary Sandpiper was observed. Doubtless it was of the western race, which is not readily distinguishable from our eastern bird.

At Seaside, Oregon, a bouldery, pebbly shore curves north from Tillamook Head to the sand. Weather-beaten trunks of great trees lie strewn and jammed along the shoreward side of this rocky strip, where they have been tossed by the waves; and, especially at low tide there is a strip of sand exposed outside the northern end of the rocks and pebbles. August 30, some Wandering Tattlers were observed along this pebbly sea-front, quiet, gentle birds, with a lisping tremulous note, whose plain gray color harmonizes well with the rocks, There were also some Spotted Sandpipers here.

From September 4 to 12, the writer was again in the dry country east of the mountains, this time at Ontario, Oregon, on the Snake river, which there makes the boundary between the states of Oregon and Idaho. Killdeers were abundant, as they had been a month earlier at Crab Creek. A little flock of Phalaropes was observed on a slough, and on September 11, a Greater Yellow-legs came near the State Fish Hatchery, walking at the edge of the river, and wading in shallow water.



A LONELY BUT NOT "SOLITARY" SANDPIPER
(Probably *Ereunetes mauri*)

The Migration of Flycatchers

EIGHTH AND CONCLUDING PAPER*

Compiled by Professor W. W. Cooke, Chiefly from Data
in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

CRESTED FLYCATCHER

The Crested Flycatcher is one of the slower spring migrants. It winters from Guatemala to northern South America and though it reaches northern Florida in late March, it moves northward so slowly that it is the middle of May by the time it has traversed the thousand miles thence to southern Maine.

SPRING MIGRATION

PLACE	Number of years record	Average date of spring arrival	Earliest date of spring arrival
Northern Florida.....	12	March 31	March 8, 1907
Southeastern Georgia.....	3	April 3	March 21, 1907
Atlanta, Ga. (near).....	13	April 13	April 3, 1894
Charleston, S. C. (near).....	11	April 16	April 10, 1882
Raleigh, N. C.....	16	April 18	April 9, 1888
Asheville, N. C. (near).....	5	April 20	April 13, 1890
New Market, Va.....	5	May 1	April 25, 1897
Variety Mills, Va.....	11	May 1	April 24, 1892
French Creek, W. Va.....	3	April 26	April 19, 1891
Washington, D. C.....	23	April 30	April 20, 1896
Waynesburg, Pa.....	4	April 27	April 26, 1896
Beaver, Pa.....	5	May 1	April 27, 1891
Berwyn, Pa.....	13	May 3	April 24, 1893
Morristown, N. J.....	9	May 6	May 3, 1887
New Providence, N. J.....	10	May 8	May 4, 1887
Englewood, N. J.....	9	May 8	May 6, 1905
Southeastern New York.....	6	May 6	May 4, 1888
Shelter Island, N. Y.....	12	May 8	May 1, 1896
Ballston Spa, N. J.....	8	May 6	May 2, 1894
Paradox, N. Y.....	4	May 9	May 8, 1889
Bridgeport, Conn.....	5	May 10	May 8, 1905
Hadlyme, Conn.....	9	May 8	May 4, 1902
Eastern Massachusetts.....	12	May 13	May 8, 1896
St. Johnsbury, Vt.....	9	May 16	May 10, 1901
Southwestern Maine.....	8	May 17	May 9, 1904
Montreal, Canada.....	7	May 15	May 10, 1889
New Orleans, La.....	12	March 28	March 12, 1894
Southern Mississippi.....	3	April 6	March 30, 1902
Helena, Ark.....	12	April 18	April 12, 1897
Athens, Tenn.....	7	April 17	April 9, 1908
Chattanooga, Tenn.....	6	April 17	April 12, 1903
Eubank, Ky.....	10	April 17	April 13, 1893
St. Louis, Mo.....	6	April 24	April 21, 1885
Brookville, Ind.....	4	April 21	April 18, 1888
Bloomington, Ind.....	8	April 24	April 18, 1893
Oberlin, O.....	11	April 30	April 25, 1899
Plymouth, Mich.....	9	May 2	April 25, 1896
Petersburg, Mich.....	12	May 2	April 27, 1888

*To be followed by a series of similar papers on the Vireos

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Chicago, Ill.....	13	May 4	April 27, 1892
Southwestern Ontario.....	22	May 4	May 1, 1900
Ottawa, Ont.....	18	May 13	May 5, 1902
Hillsboro, Ia.....	5	April 26	April 20, 1896
Indianola, Ia.....	5	April 29	April 27, 1902
Central Iowa.....	12	May 4	April 26, 1906
Minneapolis, Minn. (near).....	7	May 17	May 11, 1889
Lomita, Tex.....			March 19, 1880
Refugio County, Tex.....			March 13, 1899
Gainesville, Tex.....	5	April 12	April 9, 1885
Manhattan, Kans.....	3	April 27	April 25, 1891
Onaga, Kans.....	15	May 3	April 27, 1892
Southeastern Nebraska.....	7	May 9	May 2, 1900
Aweme, Man.....			May 24, 1906

FALL MIGRATION

The Crested Flycatcher breeds in the Gulf States, so that there are no records of the commencement of fall migration. It has been noted as arriving at Truxillo, Honduras, September 19, 1887; Bluefields, Nicaragua, October 5, 1905; Bonda, Columbia, November 1, 1899.

FALL MIGRATION

PLACE	Number of years' record	Average date of last one seen	Latest date of the last one seen
Aweme, Man.....			September 11, 1906
Montreal, Canada.....			September 4, 1893
Ottawa, Ont.....	4	August 26	September 10, 1893
Southwestern Ontario.....	4	August 31	October 4, 1903
Chicago, Ill.....	4	September 6	September 18, 1900
Keokuk, Ia.....	6	September 13	September 17, 1901
Onaga, Kans.....			October 2, 1891
Oberlin, O.....	4	September 11	September 14, 1899
Wansee, O.....	6	September 26	October 2, 1894
New Haven, Conn.....			September 17, 1907
New Providence, N. J.....	5	September 13	September 15, 1887
Berwyn, Pa.....	3	September 16	September 18, 1899
Washington, D. C.....	6	September 18	September 29, 1907
Raleigh, N. C.....	5	September 21	October 16, 1891
St. Mary's, Ga.....			September 11, 1905
Tallahassee, Fla.....			September 19, 1887
Biloxi, Miss.....			September 30, 1905
Ariel, Miss.....			October 15, 1897

ARIZONA CRESTED FLYCATCHER

Both this form and its subspecies the Mexican Crested Flycatcher, winter in Mexico, and a few individuals of each form come into the southern United States to breed. The Mexican Crested Flycatcher is found in summer in the

valley of the lower Rio Grande in Texas where its arrival has been noted. April 1, 1877; April 28, 1878; April 22, 1880; March 26, 1894. It remains until late September.

The Arizona Crested Flycatcher has been recorded as arriving in southern Arizona April 20, and remaining until September.

ASH-THROATED FLYCATCHER

This species is confined to the western United States, coming east only to Colorado and to southern Texas. It winters in Mexico and Guatemala.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
San Antonio, Tex.....	10	March 20	March 10, 1904
Huachuca Mountains, Ariz.....			April 9, 1903
Carlisle, New Mex.....			April 16, 1890
Pueblo, Colo.....			May 12, 1894
Southern California.....	9	April 12	March 10

FALL MIGRATION

The last is reported from Los Angeles County, Cal., September 14, 1895; Bonham, Texas, October 17, 1885; and Silver City, New Mexico, November 20, 1883.

OLIVACEOUS FLYCATCHER

After spending the winter in Mexico, a few of this species come north and spend the summer in the mountains of southern Arizona. They arrived in the Huachucas, April 6, 1902 and remained until later than September 3. A straggler was taken, May 11, 1883, at Fort Lyon, Colorado.

Bird-Lore's Advisory Council

The demands made upon our space by the exceptionally large census returns compel us to defer the publication, for the ninth successive year, of the names and addresses of the ornithologists who, constituting BIRD-LORE'S Advisory Council, have consented to aid less experienced workers.



The Ninth Christmas Bird Census

THE present winter appears to be an exceptionally favorable one for birds. We may attribute the presence of several species north of their usual winter range to the mild weather and comparatively light snow-fall; but this same reason makes it difficult to explain the abundance of certain boreal birds.

A winter Phoebe at New Haven is possibly more surprising than the two Tree Swallows on Gardiner's Island, where the unlimited supply of bayberries no doubt furnished the two birds observed with food.

From this remarkable island, also, we have a record of the Ruby-crowned Kinglet, which Mr. Roy Latham writes was satisfactorily identified. An individual of this bird was also seen at Orient, L. I., where, Mr. Latham writes, a Ruby-crown stayed throughout the winter of 1907-8, and he adds that he has December records of this species during the past four years at Orient.

The Carolina Wren appears in an unusually large number of northern lists in this census. Evidently this species has extended its range northward in recent years, and it is now permanently resident as far north as southern Connecticut and Rhode Island; while, northward to the vicinity of Boston, it is of not infrequent occurrence.

A correspondent asks how it is possible to state with accuracy the number of individuals of a species seen. Where the number is small, no difficulty should arise here, provided one's route does not bring the same birds under observation more than once; but where birds are abundant, it is not to be expected that one can ascertain their *exact* numbers. An estimate, however, conveys a much more definite idea than the terms "Common," "Abundant," etc.

It is also asked whether, when censuses are signed by more than one person, the observers worked together, all seeing practically the same birds, or whether they worked independently of one another, the census being their combined records? We assume in cases of this kind that the observers are more or less closely associated; but in the future it would be well to have an understanding in regard to this matter, so that when observers take different routes, the results will not be combined in one census, when, in fact, two or more censuses have been made.—ED.

Milliken, Ontario.—Dec. 25; 10.25 to 11.50 A.M. Cloudy; wind west and moderately strong; about three inches of snow on ground; temp., about 40°. Downy Woodpecker, 2; Crow, 2; White-breasted Nuthatch, 2; Golden-crowned Kinglet, 1. Total, 4 species, 7 individuals. Flocks of Pine Grosbeaks have been seen occasionally this month. We have been twice visited by flocks of White-winged Crossbills. Redpolls are abundant and Snowflakes are quite common.—LESLIE H. MILLER.

Millbrook, Ontario.—Dec. 25; 9 A.M. to 12 M. Thawing; half a foot of snow on ground; wind southwest. Great Blue Heron, 1; Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 16; White-winged Crossbill, 45; Redpoll, 12; Chickadee, 20; Robin, 1. Total, 8 species, 97 individuals.—SAM. HUNTER.

Melville Cross, Ontario.—Dec. 22; 9 A.M. to 12 M.; 2 to 3 P.M. Wind west, light; temp., 17° to 20°. Goshawk, 1; Downy Woodpecker, 1; Blue Jay, 5; Crow, 2; Pine Grosbeak, 8; American Crossbill, 30; White-winged Crossbill, 5; Pine Siskin, 3; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Chickadee, 2. Total, 11 species, 62 individuals.—ALVIN SCOTT.

Orangeville, Ontario.—Dec. 24; 10 A.M. to 3.30 P.M. Wind south, light; temp., 30° to 35°. Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 7; Crow, 1; Pine Grosbeak, 2; Snowflake, 100; White-breasted Nuthatch, 2; Chickadee, 2. Total, 8 species, 119 individuals.—ALVIN SCOTT and J. F. CALVERT.

Reaboro, Ontario.—Dec. 25; 7.25 A.M. to 1.20 P.M.; 1.45 to 5.50 P.M. Sky dull in morning, clear in afternoon; about seven inches of snow; wind southwest, light; temp., 34° to 37°. Hawk (species unknown), 1; Hairy Woodpecker, 3; Blue Jay, 8; White-winged Crossbill, 40; Pine Grosbeak, 2; Redpoll, 95; Snowflake, 250; Junco, 1; Northern Shrike, 1; Red-breasted Nuthatch, 4; White-breasted Nuthatch, 9; Chickadee, 33. Total, 12 species, 447 individuals. Crow was seen on December 24, a Tree Sparrow on December 17, and a Song Sparrow on December 15.—E. W. CALVERT.

Toronto, Ontario,—Lakeshore.—Dec. 24; Thawing; one inch of snow on ground; wind southerly. Herring Gull, 50; American Golden-eye Duck, 40; Old Squaw, 60; Flicker, 1; Horned Lark, 8; Crow, 5; Meadowlark, 1; Redpoll, 20; Golden-crowned Kinglet, 1; Robin, 3. Total, 10 species, 189 individuals.—SAM HUNTER.

Blanchard, Me.—Dec. 24; 9.30 A.M. to 12 M.; 2 to 4.30 P.M. Cloudy; ten inches snow; wind north, light; temp., 10°. Downy Woodpecker, 2; Arctic Three-toed Woodpecker, 1; Pileated Woodpecker, 1; Canada Jay, 3; Pine Siskin, 5; Brown Creeper, 2; Red-breasted Nuthatch, 1; Chickadee, 18; Hudsonian Chickadee, 1. Total, 9 species, 34 individuals.—FRANCIS G. BLAKE.

Bethel, Vermont.—Dec. 23; 2 to 3.50 P.M. Clear; about a foot of snow; light, northeast wind; temp., 16° to 19°. Pine Siskin, 25; Chickadee, 2; Tree Sparrow, 1. Total, 3 species, 28 individuals. Saw a Song Sparrow a few days ago, and heard his call-note on Christmas day.—ELIZA F. MILLER.

Clarendon, Vt.—Dec. 25; 9.15 A.M. to 5 P.M. Sky cloudy, with occasional flakes of snow; wind northwest, very light; temp., 31°. Ruffed Grouse, 2; Short-eared Owl, 1; Downy Woodpecker, 1; Blue Jay, 5; American Crossbill, 3; White-winged Crossbill, 30; Redpoll, 150; Snowflake, 12; Field Sparrow, 1; Northern Shrike, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, 3; Golden-crowned Kinglet, 1. Total, 15 species, 214 individuals.—L. HENRY POTTER.

Essex Junction, Vt.—Dec. 23; 1 to 5 P.M. Clear; six inches of snow; wind northeast, light; temp., 10°. English Pheasant (wild), 1; Downy Woodpecker, 1; Blue Jay, 2; Crow, 79; Goldfinch, 12; Snowflake, 27; Chickadee, 4. Total, 7 species, 126 individuals.—CARLTON D. HOWE.

Cornish, N. H.—Dec. 22; 10.15 A.M. to 12 M.; 2.05 to 3.45 P.M. Clear; ground covered with several inches of snow; wind light; temp., 16°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 7; Goldfinch, 1; Snowflake, about 90; Brown Creeper, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 3; Chickadee, 22. Total, 9 species, 129 individuals.—ETHEL R. BARTON.

Tilton, N. H.—Dec. 25; 10.40 A.M. to 3.20 P.M. Cloudy, with a little snow; about one foot of snow on ground; wind northwest, very light; temp., 28°. American Merganser, 4; American Golden-eye, 32; Downy Woodpecker, 4; Blue Jay, 3; Redpoll, 7; White-breasted Nuthatch, 2; Chickadee, 9. Total, 7 species, 61 individuals.—GEORGE L. PLIMPTON and EDWARD H. PERKINS.

Wilton, N. H.—Dec. 25; 8 A.M. to 12.15 P. M. Clear till 10 A.M.; cloudy after; four to five inches snow; no wind; temp., 35° to 45°. Ruffed Grouse, 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 9; Crow, 2; Redpoll, 325; Tree Sparrow, 12; Junco,

4; Brown Creeper, 1; Chickadee, 10; Golden-crowned Kinglet, 2. Total, 11 species, 370 individuals.—GEO. G. BLANCHARD and JAS. A. WING.

Randolph, N. H.—Dec. 25; 8 A. M. to 12.30 P. M. Clear; snow twenty inches deep; wind west, light; temp., 30°. Hairy Woodpecker, 1; Canada Jay, 1; Redpoll, 24; Siskin, 2; Chickadee, 4; Golden-crowned Kinglet, 2. Total, 6 species, 34 individuals.—GORDON BOIT WELLMAN.

Leominster, Mass.—Dec. 27; 7.30 A. M. to 3.30 P. M. Clear first part of day, cloudy during middle, and clear in the late part of the afternoon; considerable bare ground in the open; three inches of snow in the woods; wind southwest, light; temp., 40°. Part-ridge, 2; Downy Woodpecker, 1; Flicker, 6; Blue Jay, 2; Crow, 8; Redpoll, 50; Goldfinch, 25; Tree Sparrow, 8; White-breasted Nuthatch, 3; Chickadee, 7. Total, 10 species, 112 individuals.—EDWIN RUSSELL DAVIS.

Fitchburg, Mass.—Dec. 28; 11 A. M. to 2 P. M. Clear; two to three inches of snow; wind light, southwest; temp., 34°. Ruffed Grouse, 1; Blue Jay, 7; Crossbills, 6; Goldfinch, 24; Brown Creeper, 2; Red-breasted Nuthatch, 5; Chickadee, 7; Golden-crowned Kinglet, 2. Total, 8 species, 54 individuals.—F. N. DILLON and G. F. HUBBARD.

Needham, Mass.—Dec. 22; 9 A. M. to 12 M. Dull sunlight; ground mostly covered with snow; wind north to northwest, light; temp., 22°. Downy Woodpecker, 1; Flicker, 1; Blue Jay, 4; Crow, 5; Redpoll, 75; Tree Sparrow, 14; Junco, 3; Brown Creeper, 1; Chickadee, 11. Total, 9 species, 115 individuals.—CHARLES E. HEIL.

Waltham, Mass.—Dec. 25; 10 A. M. to 1 P. M. Clear; ground partly covered with snow; wind southwest, mild; temp., 44°. Crow, 8; Blue Jay, 2; Chickadee, 5; Downy Woodpecker, 2; Goldfinch, 7; Northern Shrike, 1; Red-breasted Nuthatch, 2; Total, 7 species, 27 individuals.—B. L. RIPLEY.

West Roxbury, Mass.—Dec. 21; 10 A. M. to 2 P. M. Fair; ground mostly covered with snow; light, southwest wind, becoming brisk; temp., 34°. Downy Woodpecker, 1; Flicker, 8; Blue Jay, 6; Crow, 18; Meadowlark, 27; Tree Sparrow, 7; Junco, 15; Song Sparrow, 3; Northern Shrike, 1; Chickadee, 11. Total, 10 species 97 individuals.—CHARLES E. HEIL.

Belmont, Mass.—Dec. 24; 9 to 10.30 A. M. Partly cloudy; ground covered with snow; wind not noticeable; temp., 10°. Downy Woodpecker, 1; Blue Jay, 3; Crow, 4; American Crossbill, 6; Pine Siskin, 9; Junco, 12; Fox Sparrow, 1; White-breasted Nuthatch, 1. Total, 8 species, 37 individuals.—SAMUEL DOWSE ROBBINS.

Belmont and Arlington, Mass.—Dec. 28; 9.30 A. M. to 12.15 P. M. Clear; patches of snow on ground; strong northwest wind; temp., 40°. Downy Woodpecker, 2; Flicker, 1; Blue Jay, heard one flock; Crow, 8; American Crossbill, heard two flocks; Tree Sparrow, heard one flock; Junco, 23; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 6; Golden-crowned Kinglet, 2. Total, 11 species, over 60 individuals.—ARTHUR W. FLETCHER and SAMUEL DOWSE ROBBINS.

Belmont, Arlington Heights, and Lexington (Rocked Meadow), Mass.—Dec. 27; 2 to 5 P. M. Cloudy; patches of snow on ground; light, west breeze; temp., 38°. White-winged Crossbill, 8; Tree Sparrow, 90; Song Sparrow, 5; White-breasted Nuthatch, 1; Chickadee, 10; Golden-crowned Kinglet, 8. Total, 6 species, 122 individuals.—SAMUEL DOWSE ROBBINS and CHANDLER ROBBINS HUNT.

Cambridge, Mass. (Fresh Pond Park and Marshes).—Dec. 21; 9.30 A. M. to 1 P. M. Clear; one inch of snow on ground; wind southwest, light; temp., 34° to 44°. Herring Gull, 30; Ring-necked Pheasant, 3; Sparrow Hawk, 1; Long-eared Owl, 1; Northern Flicker, 4; Blue Jay, 2; Crow, 6; Red-winged Blackbird, 1; Meadowlark, 3; Purple Finch, 1; Redpoll, 75; Goldfinch, 15; Pine Siskin, 40; White-throated Sparrow, 1; Tree Sparrow, 12; Junco, 5; Song Sparrow, 10; Swamp Sparrow, 3; Northern Shrike, 1; Chickadee, 2; Golden-crowned Kinglet, 5. Total, 21 species, 221 individuals.—HORACE W. WRIGHT.

Cambridge, Mass. (Fresh Pond Reservation, Maple Swamp and Pout Pond Swamp).—Dec. 26; 10 to 11.30 A.M. Partly cloudy; wind west, brisk; temp., 25°. Great Black-backed Gull, 1; Herring Gull, 700; Black Duck, 10; American Golden-eye, 35; Ring-necked Pheasant, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Flicker, 3; Crow, 3; Redpoll, 20; Goldfinch, 5; Pine Siskin, 25; White-throated Sparrow, 1; Tree Sparrow, 12; Song Sparrow, 2; Red-breasted Nuthatch, 1; Chickadee, 4; Golden-crowned Kinglet, 3. Total, 18 species, 828 individuals.—BARRON BRAINERD, J. KITTREDGE and JAMES L. PETERS.

Brookline, Mass. (Arboretum, Jamaica Pond).—Dec. 23; 8.30 A.M. to 12.15 P.M. Cloudy; ground covered with patches of snow; wind northeast, strong; temp., 15°. American Merganser, 1; Mallard, 1; Black Duck, 30; American Widgeon, 1; Lesser Scaup Duck, 7; American Golden-eye, 1; American Coot, 1; Downy Woodpecker, 1; Flicker, 8; Blue Jay, 1; Crow, 42; Pine Siskin, 153; White-throated Sparrow, 3; Tree Sparrow, 2; Junco, 15; Song Sparrow, 2; White-breasted Nuthatch, 1; Chickadee, 3; Golden-crowned Kinglet, 1; Hermit Thrush, 1; Robin, 1. Total, 21 species, 276 individuals.—J. KITTREDGE, JR., and R. M. MARBLE.

Boston, Mass. (Brookline Fenway, Olmsted and Riverway Parks, Jamaica Pond, Arnold Arboretum to Forest Hills, Squantum and Moon Island).—Dec. 19; 9 A.M. to 12.15 P.M.; 1.55 to 3.55 P.M. Clear; one inch of snow; wind west, light; temp., 20° to 30°. Herring Gull, 296; Red-breasted Merganser, 8; Mallard, 1; Black Duck, 85; American Widgeon, 1; Scaup Duck, 450; Lesser Scaup Duck, 6; American Golden-eye, 52; Bufflehead, 21; Old Squaw, 7; Ruddy Duck, 3; American Coot, 2; Bob-white, 11; Sparrow Hawk, 1; Downy Woodpecker, 3; Northern Flicker, 8; Blue Jay, 6; Crow, 110; Meadowlark, 4; Redpoll, 2; Goldfinch, 1; Pine Siskin, 24; White-throated Sparrow, 11; Tree Sparrow, 1; Song Sparrow, 5; Northern Shrike, 1; Myrtle Warbler, 1; White-breasted Nuthatch, 1; Chickadee, 13; Golden-crowned Kinglet, 4; Robin, 5. Total, 32 species, 1,145 individuals.—BARRON BRAINERD with H. W. WRIGHT and DR. BRAINERD in the A.M.; with C. J. MAYNARD in P.M.

Wyoming, through Middlesex Fells to West Medford, Mass.—Dec. 27; 9.15 A.M. to 1 P.M. Fair; ground partly covered with snow; wind southwest, light, temp., 35°. Herring Gull, 1; Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 7; Crow, 13; American Crossbill, 2; Redpoll, 55; Pine Siskin, 27; Junco, 5; Brown Creeper, 3; White-breasted Nuthatch, 2; Chickadee, 12. Total, 12 species, 129 individuals. December 24, there was one Screech Owl, one Northern Shrike and one Song Sparrow on our place in West Medford.—EDMUND and LIDIAN E. BRIDGE.

Chestnut Hill Reservoir and vicinity, Jamaica Pond and Arnold Arboretum, Mass.—Dec. 20; 9.40 to 10.20 A.M. Clear; less than an inch of snow; wind west, brisk; temp., 34°. Great Black-backed Gull, 2; Herring Gull, 80; American Merganser, 39; Mallard, 1; Black Duck, 85; American Widgeon, 1; Wood Duck, 1; Lesser Scaup Duck, 1; American Golden-eye, 2; Ruddy Duck, 3; American Coot, 1; Northern Flicker, 3; Blue Jay, 2; Crow, 6; Redpoll, 2; Goldfinch, 1; Pine Siskin, 17; White-throated Sparrow, 5; Junco, 7; Song Sparrow, 1; Northern Shrike, 1; Myrtle Warbler, 1; Chickadee, 18; Golden-crowned Kinglet, 1. Total, 24 species, 281 individuals.—R. M. MARBLE and BARRON BRAINERD.

Jamaica Pond and Arnold Arboretum, Mass.—Dec. 25; 9 to 11 A.M. Clear; ground partially covered with snow; wind southwest, light; temp., 40°. Mallard, 50; Black Duck, 30; Scaup Duck, 2; Canada Goose, 6; Blue Jay, 6; Crow, 8; White-throated Sparrow, 5; Song Sparrow, 2; Fox Sparrow, 2; Brown Creeper, 2; Red-breasted Nuthatch, 3; Chickadee, 4. Total, 12 species, 120 individuals. American Coot, Ruddy Duck, Herring Gull, Baldpate and Robin seen this winter (2 weeks ago).—HAROLD A. ZIMMERMAN.

Ipswich, Mass.—Dec. 26; 10.30 A.M. to 4.30 P.M. Clear; ground snow-covered;

wind southwest, light; temp., 38°. Herring Gull, 50; Partridge, 1; Pheasant, 1; Hawk, 1; Flicker, 1; Horned Lark, 8; Blue Jay, 1; Crow, 100; Junco, 30; Nuthatch, 2; Chickadee, 19. Total, 11 species, 214 individuals.—JESSE WADE, FRANCIS C. WADE and PAUL P. PINGREE.

Rockport, Mass.—Dec. 28; 9.45 A.M. to 1 P.M. Clear; wind west; temp., 40°. Horned Grebe, 2; Northern Loon, 2; Black Guillemot, 5; Razor-billed Auk, 1; Kittiwake, 1; Black-backed Gull, 4; Herring Gull, 25; Red-breasted Merganser, 19; Old Squaw, 4; Northern Flicker, 4; Crow, 15; American Crossbill, 3; Snow Bunting, 3; Song Sparrow, 3; Myrtle Warbler, 70; Chickadee, 5; Golden-crowned Kinglet, 1; Robin, 1. Total, 18 species, 168 individuals.—J. L. PETERS and BARRON BRAINERD.

Rockport, Mass.—Dec. 21; 11 A.M. to 2 P.M. Clear; ground lightly covered with snow; wind southwest, light; temp., 38°. Horned Grebe, 4; Loon, 1; Dovekie, 2; Herring Gull, 200; Red-breasted Merganser, 3; American Golden-eye, 2; Old Squaw, 5; Northern Flicker, 3; Shore Lark, 12; Crow, 7; Snowflake, 13; Northern Shrike, 1; Myrtle Warbler, 23. Total, 13 species, 276 individuals.—ELIZABETH D. BOARDMAN and LIDIAN E. BRIDGE.

Nahant, Mass.—Dec. 22; 9.30 A.M. to 12.30 P.M. Somewhat cloudy; ground partly covered with snow and ice; wind northwest, moderate; temp., 24°. Horned Grebe, 1; Razor-billed Auk, 1; Loon, 1; Herring Gull, 125; American Golden-eye, 37; Bufflehead, 16; Old Squaw, 28; White-winged Scoter, 5; Horned Lark, 13; Crow, 53; Redpoll, 3; Pine Siskin, 1; Snowflake, 14. Total, 13 species, 298 individuals.—LIDIAN E. BRIDGE.

Marblehead Neck, Mass.—Dec. 26; 12 M. to 2.30 P.M. Cloudy; ground almost bare; wind southwest, light; temp., 43°. Horned Grebe, 19; Great Black-backed Gull, 1; Herring Gull, 31; Red-breasted Merganser, 5; American Golden-eye, 46; Old Squaw, 12; Northern Flicker, 1; Song Sparrow, 3; Fox Sparrow, 1. Total, 9 species, 123 individuals.—EDMUND and LIDIAN E. BRIDGE.

Lynn, Nahant Beach, Little Nahant, Big Nahant to Eastern Point and return.—Dec. 24; 10 A.M. to 3.15 P.M. Partly cloudy; light to brisk southwest wind; the day after a sixty mile northeast storm; temp., 16° to 26°. Horned Grebe, 1; Loon, 2; Red-throated Loon, 1; Black Guillemot, 1; Brunnich's Murre, 1; Razor-billed Auk, 2; Great Black-backed Gull, 11; Herring Gull, 998; Red-breasted Merganser, 11; Scaup Duck, 33; American Golden-eye, 6; Bufflehead, 25; Old Squaw, 66; White-winged Scoter, 1; Surf Scoter, 4; American Sparrow Hawk, 1; Horned Lark, 36; Crow, 43; Snowflake, 4. Total, 19 species, 1,238 individuals.—BARRON BRAINERD, R. M. MARBLE and R. L. CREESEY.

Atlantic, Squantum and Moon Island, Mass.—Dec. 26; 10 A.M. to 2 P.M. Partly cloudy; patches of snow on ground; strong, west wind; temp., 40°. Great Black-backed Gull, 1; Herring Gull, 100; Red-breasted Merganser, 2; Scaup Duck, 8; American Golden-eye, 100; Old Squaw, 1; Sparrow Hawk, 1; Flicker, 2; Horned Lark, 10; Crow, 100; Meadowlark, 1. Total, 11 species, 326 individuals.—SAMUEL DOWSE ROBBINS and FRANK C. SEYMOUR.

Plymouth, Mass.—Dec. 22. Cloudy; ground bare; light wind; temp., about 28°. Downy Woodpecker, 1; Flicker, 3; Blue Jay, 3; Crow, 3; Redpoll, 5; White-throated Sparrow, 2; Tree Sparrow, 2; Junco, 9; Song Sparrow, 1; Cedarbird, 7; Myrtle Warbler, 35; Brown Creeper, 4; Red-breasted Nuthatch, 1; Chickadee, 12; Golden-crowned Kinglet, 9. Total, 15 species, 97 individuals.—SIDNEY F. BLAKE.

Plymouth, Mass.—Dec. 24; 10 A.M. to 2 P.M. Clear and cold; four inches ice on ponds; ground icy in places; temp., 32°. Downy Woodpecker, 3; Blue Jay, 4; Crow, 11; Tree Sparrow, 13; Junco, 27; Song Sparrow, 1; Myrtle Warbler, 4; Brown Creeper, 5; Chickadee, 125. Total, 9 species, 193 individuals.—WARREN E. CARLETON and LINUS MURPHY.

Sandy Neck and East Sandwich, Mass.—Dec. 27; 6 A.M. to 6 P.M. Clear; ground

bare; wind moderate, southwest; temp., 27° at start. Country traversed, salt marsh, sand hills, beach, pasture and pine woods. Horned Grebe, 25; Loon, 15; Red-throated Loon, 3; Black-backed Gull, 8; Herring Gull, 500; Red-breasted Merganser, 6; Black Duck, 6; Greater Scaup Duck, 1; Golden-eye, 25; Old Squaw, 20; White-winged Scoter, 25; Downy Woodpecker, 2; Flicker, 2; Horned Lark, 10; Crow, 25; Meadowlark, 3; Goldfinch, 5; Pine Siskin, 25; Tree Sparrow, 35; Field Sparrow, 2; Song Sparrow, 15; Myrtle Warbler, 50; Chickadee, 10; Robin, 15; Bluebird, 4. Total, 25 species, about 837 individuals.—ALFRED C. REDFIELD.

Taunton, Mass.—Dec. 21; 11 A.M. to 12.10 P.M. Clear; ground bare; wind west, strong; temp., 40°. Blue Jay, 2; Junco, 33; Song Sparrow, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 4; Chickadee, 8. Total, 6 species, 49 individuals.—M. E. CHACE.

Taunton, Mass.—Dec. 26; 9.45 to 11.45 A.M. Clear; ground bare; wind, west, light; temp., 35°. Crow, 4; Goldfinch, 107; Pine Siskin, 7; Junco, 35; Song Sparrow, 4; Myrtle Warbler, 1; Red-breasted Nuthatch, 3; Chickadee, 16. Total, 8 species, 177 individuals.—EDITH M. HODGMAN.

Edgartown, Mass.—Dec. 30; 6.30 A.M. to 4.30 P.M. Cloudy; wind east to northeast; temp., 40°. Horned Grebe, 4; Loon, 1; Red-throated Loon, 1; Herring Gull, 30; Great Black-backed Gull, 7; American Merganser, 8; Red-breasted Merganser, 1; Black Duck, 2; Canvasback, 1; Red-head, 234; Scaup Duck, 722; American Golden-eye, 84; Bufflehead, 12; White-winged Scoter, 24; Surf Scoter, 2; Canada Goose, 1; Heath Hen, 95; Marsh Hawk, 1; American Rough-legged Hawk, 5; Bald Eagle, 1; Hairy Woodpecker, 1; Flicker, 3; Horned Lark, 87; Crow, 44; Meadowlark, 12; Pine Siskin, 2; Snow Bunting, 6; Ipswich Sparrow, 43; Savanna Sparrow, 3; Tree Sparrow, 16; Song Sparrow, 3; Myrtle Warbler, 4; Chickadee, 9; Golden-crowned Kinglet, 4. Total, 34 species, 1,474 individuals.—J. L. PETERS and BARRON BRAINERD.

Gloicester, R. I.—Dec. 25; 7.30 to 11.30 A.M. Clear; snow in patches; wind southwest, light; temp., 35°. Ruffed Grouse, 3; Hairy Woodpecker, 1; Downy Woodpecker, 4; Flicker, 1; Blue Jay, 4; Crow, 10; Redpoll, 40; Goldfinch, 5; Tree Sparrow, 7; Myrtle Warbler, 7; Chickadee, 10. Total, 11 species, 92 individuals.—J. IRVING HILL.

Woonsocket, R. I. Dec. 25; 9.15 A.M. to 12.15 P.M. Clear; ground bare, except in spots in the woods; wind southwest, light; temp., 38° to 45°. Blue Jay, 15; Crow, 20; Pine Siskin, 10; Goldfinch, 6; Tree Sparrow, 75; Junco, 50; Brown Creeper, 1; Chickadee, 9; Bluebird, 3. Total, 9 species, 189 individuals.—CLARENCE M. ARNOLD.

Manville, R. I.—Dec. 26; 10.45 A.M. to 4 P.M. Sky overcast, sun frequently appearing in the warm bursts and as frequently obscured by clouds; ground bare; wind west, changing to north, very brisk; temp., 40° to 42°. Blue Jay, 2; Crow, 12; Redpoll, 4; Junco, 4; Tree Sparrow, 4; Brown Creeper, 2; Red-breasted Nuthatch, 1; Chickadee, 1. Total, 8 species, 30 individuals.—ANNA P. C. MOWRY.

Middletown, Conn.—Dec. 20; 1.30 to 5.30 P.M. Cloudy; about two inches of snow on ground; wind north, light; temp., 28°. Downy Woodpecker, 2; Blue Jay, 2; Crow, 4; Cowbird, 3; Tree Sparrow, 36; Junco, 4; White-breasted Nuthatch, 4; Chickadee, 15; Golden-crowned Kinglet, 4. Total, 9 species, 74 individuals. Herring Gulls, Song Sparrows, Purple Finches, Redpolls, Flickers and Meadowlarks are also present, but were not seen this walk.—EDWARD H. PERKINS.

Waterbury, Conn., to Waterville and Brown's Farm.—Dec. 26; 7.25 to 8.10 A.M.; 9.45 A.M. to 12.10 P.M. Clear till noon; ground bare in some sunny places; wind northwest; temp., 29° to 37°. Downy Woodpecker, 1; Blue Jay, 4; Crow, 9; Goldfinch (heard); Pine Siskin, 1; Tree Sparrow, 1; Junco, 20; White-breasted Nuthatch, 1; Chickadee, 6; Bluebird, 6. Total, 10 species, 50 individuals.—NORMAN B. PILLING and H. G. ANDERSON.

Washington, Conn.—Dec. 27; 9 to 9.30 A.M. Fair; ground covered with light snow;

no wind; temp., 34°. Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 4; Golden-crowned Kinglet. While riding on the trolley, between New Haven and Bridgeport, on December 26, saw two Herring Gulls, five Meadowlarks and one Crow.—WILHELMINA C. KNOWLES.

Westville, Conn.—Dec. 25; forenoon. Clear to cloudy; ground partly snow-covered; wind southwest, light. Hawk, 1; Downy Woodpecker, 3; Blue Jay, 7; Crow, 4; English Starling, 5; Purple Finch, 5; Goldfinch, 9; Tree Sparrow, 4; Junco, 40; Song Sparrow, 4; Fox Sparrow, 8; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 11. Total, 14 species, 105 individuals.—MRS. C. A. DYKEMAN.

New London, Conn.—Dec. 26; 9.30 A.M. to 2.20 P. M. Light, west breeze; temp., 55°. Horned Grebe, 18; Herring Gull, 148; American Golden-eye, 80; Flicker, 1; Shore Lark, 8; Crow, 22; Meadowlark, 24; Goldfinch, 1; Pine Siskin, 13; White-throated Sparrow, 1; Song Sparrow, 3; Brown Creeper, 3; Chickadee, 3. Robin, 2; Bluebird, 4. Total, 15 species, 331 individuals.—FRANCES M. GRAVES.

Bristol, Conn.—Dec. 25; 9 A.M. to 12.15 P.M. Light clouds, increasing to shower of rain and sleet at 12 M.; three inches snow; wind southwest to south, very light at noon; temp., 32° to 48° at noon. Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 11; Crow, 6; Redpoll, 175; Goldfinch, 3; Tree Sparrow, 75; Junco, 46; Song Sparrow, 1; White-breasted Nuthatch, 2; Chickadee, 5; Bluebird, 1. Total, 12 species, 327 individuals. December 23, twenty-five to thirty White-winged Crossbills, mostly males.—FRANK BRUEN.

New Haven, Conn., Edgewood Park and Mitchell's Hill.—Dec. 21; 10.30 A.M. to 12.30 P.M. Clear; three inches snow, with light crust; wind west, light; temp., 40°. Red-shouldered Hawk, 1; Downy Woodpecker, 3; Yellow-bellied Sapsucker, 1; Blue Jay, 11; Crow, 19; English Starling, 33; Goldfinch, 4; Pine Siskin, 44; White-throated Sparrow, 11; Tree Sparrow, 55; Junco, 60; Song Sparrow, 3; Myrtle Warbler, 3; Brown Creeper, 3; White-breasted Nuthatch, 3; Chickadee, 22; Golden-crowned Kinglet, 3; Robin, 1. Total, 18 species, 280 individuals.—CLIFFORD H. PANGBURN.

New Haven, Conn., Momauguin to Lighthouse Point.—Dec. 22; 9.30 A.M. to 3 P.M. Cloudy; two inches of snow; wind light, northeast; temp., 29°. Horned Grebe, 3; Herring Gull, 42; Golden-eye, 2; White-winged Scoter, 7; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Blue Jay, 2; Crow, 14; Starling, 7; Red-winged Blackbird, 2; Meadowlark, 28; White-winged Crossbill, 25; Goldfinch, 14; Junco, 1; Tree Sparrow, 38; Song Sparrow, 17; Fox Sparrow, 1; Chickadee, 3; Robin, 2. Total, 19 species, 210 individuals.—ALBERT W. HONYWILL, JR., CLIFFORD H. PANGBURN and M. B. PANGBURN.

New Haven, Conn., Lake Saltonstall, Saltonstall Ridge and Foxon.—Dec. 25; 9.45 A.M. to 2 P.M. Clear to cloudy; two inches of snow; wind brisk, southwest; temp., 34°. Herring Gull, 1; Black Duck, 69; Golden-eye, 2; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 8; Crow, 29; Starling, 6; White-winged Crossbill, 12; Goldfinch, 4; Pine Siskin, 110; Tree Sparrow, 11; Junco, 9; Song Sparrow, 4; White-breasted Nuthatch, 5; Red-breasted Nuthatch, 4; Brown Creeper, 2; Chickadee, 4; Golden-crowned Kinglet, 12; Bluebird, 1. Total, 20 species, 299 individuals.—CLIFFORD H. PANGBURN.

New Haven, Conn., Forest Street and West Shore from Sandy Point to Oyster River.—Dec. 25; 9 A.M. to 1.30 P.M. Mostly cloudy; two inches of snow; wind brisk, southwest; distance covered fifteen miles. Horned Grebe, 1; Herring Gull, 127; Black Duck, 5; Golden-eye, 1; Bufflehead, 1; Old Squaw, 15; White-winged Scoter, 20; Sharp-shinned Hawk, 1; Downy Woodpecker, 2; Horned Lark, 5; Blue Jay, 4; Crow, 17; Starling, 11; Meadowlark, 2; Goldfinch, 15; Pine Siskin, 12; White-throated Sparrow, 3; Tree Sparrow, 33; Slate-colored Junco, 2; Song Sparrow, 15; Myrtle Warbler, 2; White-breasted Nuthatch, 3; Chickadee, 25; Robin, 1. Total, 24 species, 323 individuals.—D. B. PANGBURN.

New Haven, Conn., Edgewood Park to Mitchell's Hill.—Dec. 25; 9.30 A.M. to 12.15

P.M. Clear to cloudy; ground partly snow-covered; wind southwest, light; temp., 35°. Sparrow Hawk, 1; Downy Woodpecker, 5; Blue Jay, 8; Crow, 12; Starling, 32; Purple Finch, 1; Goldfinch, 8; Pine Siskin, 8; White-throated Sparrow, 13; Tree Sparrow, 5; Junco, 7; Song Sparrow, 3; Myrtle Warbler, 5; Carolina Wren, 1; Brown Creeper, 1; Chickadee, 7; Hermit Thrush, 1; Bluebird, 6. Total, 19 species, 130 individuals. The Carolina Wren sang several times, and once it came within six or eight feet of me, and scolded for a minute or two. The next morning D. B. and C. H. Pangburn went over the same ground with me and we added the Red-shouldered Hawk, Phoebe, Rusty Blackbird, Chewink, Northern Shrike, Winter Wren and Golden-crowned Kinglet. We saw the Hermit Thrush again, but could not find the Carolina Wren. These additions make a list of 25 kinds for two days for this territory. Our combined lists show that there were 41 different species in the vicinity of New Haven between December 21 and 26, 1908.—A. W. HONYWILL, JR.

South Norwalk, Conn.—Dec. 25; all day. Partly cloudy; four inches snow, light wind; temp., 30° at 7 A.M. Northern Loon, 1; Horned Grebe, 7; Pied-billed Grebe, 2; Herring Gull, 60; American Scaup Duck, 100; Merganser, 6; Golden-eye, 6; Black Duck, 3; Old Squaw, 50; Hungarian Partridge (introduced last May), 13; Red-shouldered Hawk, 1; Kingfisher, 2; Red-headed Woodpecker, 2; Downy Woodpecker, 6; Flicker, 2; Horned Lark, 10; Blue Jay, 8; Crow, 30; Starling, 200; Meadowlark, 8; White-throated Sparrow, 2; Tree Sparrow, 30; Junco, 24; Song Sparrow, 10; Titlark, 1; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 11; Chickadee, 26; Robin, 2; Bluebird, 1. Total, 32 species, 626 individuals. Red and White-winged Crossbills have been here. Three Red-headed Woodpeckers are wintering here.—NORWALK BIRD CLUB.

Pittsford, N. Y.—Dec. 25; 10.30 A.M. to 12.30 P.M. Cloudy; ground bare; wind south; temp., 38°. Downy Woodpecker, 5; Crow, 5; White-breasted Nuthatch, 1; Chickadee, 1; Junco, 6. Total, 5 species, 18 individuals.—MARY WADHAMS.

Rochester, N. Y.—Dec. 27; 9 to 11 A.M. Cloudy; ground partly bare; wind southeast, brisk; temp., 32°. Downy Woodpecker, 4; Flicker, 1; Crow, 10; Redpoll, 3; Brown Creeper, 2; White-breasted Nuthatch, 1. Total, 6 species, 21 individuals.—NETTIE SELLINGER PIERCE.

Rochester, N. Y., Bushnell's Basin and thereabouts to Despatch.—Dec. 28; 2 to 6 P.M. Weather fair; temp., 32°. Pheasant, 3; Red-tailed Hawk, 1; Downy Woodpecker, 1; Kingfisher, 1; Crow, 10; Snowflake, 2; Tree Sparrow, 12; Junco, 15; White-breasted Nuthatch, 1; Chickadee, 15. Total, 10 species, 61 individuals.—LEWIS GANNETT and C. S. LEETE.

Geneva, N. Y.—Dec. 25; 8 A.M. to 5 P.M. Cloudy, with trace of rain; about one inch of snow on the ground; temp., 35° to 42°. Horned Grebe, 20; Black Duck, 7; Canvasback, 15; Scaup Duck, 500; American Golden-eye, 100; Old Squaw, 12; Ruffed Grouse, 1; Ring-neck Pheasant, 8; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Prairie Horned Lark, 1; Crow, 300; Rusty Blackbird, 1; Redpoll, 150; Pine Siskin, 6; Tree Sparrow, 24; Junco, 3; Song Sparrow, 3; Cedar Waxwing, 2; Brown Creeper, 4; White-breasted Nuthatch, 11; Chickadee, 8; Golden-crowned Kinglet, 6. Total, 24 species, 1,200 individuals.—F. H. HALL and OTTO MCCREARY.

Syracuse, N. Y.—Dec. 24; 10 A.M. to 12 M. Cloudy; ground partly covered with snow; south wind; temp., 40°. Goldfinch, 1; Robin, 1. Total, 2 species, 2 individuals.—WINTHROP T. PENNOCK.

Rhinebeck, N. Y.—Dec. 25; 9.30 A.M. to 12.30 P.M. Cloudy; ground snow-covered; wind south, moderate; temp., 33° to 39°. Ruffed Grouse, 1; Red-shouldered Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Flicker, 3; Blue Jay, 16; Crow, 20; Goldfinch, 12; Tree Sparrow, 15; Brown Creeper, 1; White-breasted Nuthatch, 8; Chickadee, 20. Total, 13 species, 103 individuals. On December 24, Sparrow

Hawk, 1; Pine Siskin, 50; Bluebird, 2; December 26, Song Sparrow, 2. December 27, Robin, 1.—MAUNSELL S. CROSBY.

New Rochelle, N. Y.—Dec. 24; 9 A.M. to 4 P.M. Overcast, threatening snow; two inches snow on ground; no wind; temp., 20° at start. Herring Gull, 100; Ducks (could not distinguish kind), 15; Red-shouldered Hawk, 1; Cooper's Hawk, 2; Pigeon Hawk, 1; Barred Owl, 1; Screech Owl, 1; Kingfisher, 1; Downy Woodpecker, 3; Flicker, 2; Blue Jay, 6; Crow, 30; Purple Grackle, 12; Starling, 50; Meadowlark, 10; Goldfinch, 9; Purple Finch, 20; White-throated Sparrow, 4; Tree Sparrow, 5; Junco, 16; Song Sparrow, 3; Fox Sparrow, 5; Brown Creeper, 3; White-breasted Nuthatch, 4; Chickadee, 12; Winter Wren, 1; Golden-crowned Kinglet, 4; Robin, 2; Bluebird, 1. Total, 29 species, 324 individuals. Ground traversed, Long Island Sound, beach, salt marshes, fresh marshes, cedar groves, hilly and level ground, orchards, plowed fields, first-growth woods, underbush borders and pastures.—FRANCIS T. HUNTER and RALPH WHITE.

Pelham Manor, N. Y.—Dec. 25; 10 A.M. to 12 M. Cloudy; about one inch of snow on ground; no wind; temp., at 9 A.M. 38°. Downy Woodpecker, 1; Blue Jay, 3; Crow, 15; Starling, 10; Cowbird, 1; Goldfinch, 15; White-throated Sparrow, 1; Tree Sparrow, 1; Golden-crowned Kinglet, 1. Total, 9 species, 48 individuals.—ROBERT CRANE.

Bronx Park, through the Hemlock Grove, New York City.—Dec. 28; 10 A.M. to 12 M. Clear; a little snow on the ground; wind light and westerly; temp., 35°. Kingfisher, 1; Downy Woodpecker, 5; Blue Jay, 6; Crow, 3; Starling, 50; American Crossbill, 5; Pine Siskin, 2; Goldfinch, 5; White-throated Sparrow, 10; Junco, 10; Carolina Wren, 1; Brown Creeper, 5; White-breasted Nuthatch, 2; Golden-crowned Kinglet, 1. Total, 14 species, 106 individuals. On December 24, a Barred Owl and a Bob-white, and on December 24, a Barred Owl were seen.—LUDLOW GRISCOM and STANLEY V. LADOW.

Central Park, New York City.—Dec. 24; 9.15 A.M. to 12.15 P.M. Cloudy; wind south-east, light; ground snow-covered; temp., 25° to 30°. Herring Gull, 20; Red-shouldered Hawk, 1; Downy Woodpecker, 4; Crow, 1; Starling, 50; Goldfinch, 4; White-throated Sparrow, 40; Junco, 5; Song Sparrow, 9; Fox Sparrow, 4; Towhee, 1; Cardinal, 5; Carolina Wren, 2; Brown Creeper, 2; Golden-crowned Kinglet, 6; Hermit Thrush, 2. Total, 16 species, 156 individuals.—ANNE A. CROLIUS.

Central Park, New York City.—Dec. 25; 8.35 to 10.35 A.M. Mostly cloudy; ground partly snow-covered, slushy; wind southwest, moderate; temp., 40°. Herring Gull, 300 (estimated); Downy Woodpecker, 2; Starling, 9; White-throated Sparrow, 10; Junco, 3; Song Sparrow, 3; Fox Sparrow, 1; Cardinal, 3; Carolina Wren, 2; Golden-crowned Kinglet, 11; Hermit Thrush, 3. Total, 11 species, 345 individuals.—GEORGE E. HIX.

Central Park, New York City.—Dec. 26; 1.45 to 4.25 P.M. Weather partly cloudy; light, westerly winds; ground partly covered with snow; temp., 38° to 41°. Herring Gull, 7; Starling, 6; Goldfinch, 2; White-throated Sparrow, 16; Junco, 2; Song Sparrow, 3; Fox Sparrow, 2; Cardinal, 2; Golden-crowned Kinglet, 1; Hermit Thrush, 1. Total, 10 species, 42 individuals.—CHARLES H. ROGERS.

Battery, New York City, to and at the Farms (10 A.M. off Seabright, N. J.) and back.—Dec. 27; 8.30 A.M. to 4.30 P.M. Weather partly cloudy; brisk, southwest wind, temp., 33° to 37°. Brunnich's Murre, 10; Kittiwake, 15; Herring Gull, 4,000; Ring-billed Gull, 1; Bonaparte Gull, 500; Gannet, 1; American Scoter, 25; White-winged Scoter, 5 or 6; Crow, 8; Pine Siskin (?), 1. Total, 10 species, about 4,670 individuals.—R. E. STACKPOLE and C. H. ROGERS.

From the Battery to Staten Island, and New Dorp to Princes Bay, Staten Island, N. Y.—Dec. 25; 9 A.M. to 5.20 P.M. Mild, partly cloudy; about two inches of snow on the ground. Brunnich's (?) Murre, 1; Herring Gull, 325; Bonaparte's Gull, 115; Old Squaw, 32; Sparrow Hawk, 1; Barred Owl, 2; Downy Woodpecker, 2; Flicker, 2; Crow, 40; European Starling, 44; Meadowlark, 18; Am. Crossbill, 5; Goldfinch, 2; Pine Siskin, 31; Ipswich Sparrow, 1; Savanna Sparrow, 2; White-throated Sparrow, 5; Tree Sparrow, 6; Junco,

38; Song Sparrow, 9; Swamp Sparrow, 5; Fox Sparrow, 1; Cardinal, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 8; Chickadee (*P. atricapillus*), 4. Total, 26 species, 691 individuals.—JAMES CHAPIN.

Prospect Park, Brooklyn, N. Y.—Dec. 21; 11.30 A.M. to 3 P.M. Sunshine; ground partially covered with snow; thin ice on parts of the shallow ponds; wind west, light, increasing to brisk; temp., 40°. Hawk, 1; Redpoll, 1; Pine Siskin, 7; White-throated Sparrow, 5; Song Sparrow, 1; Hermit Thrush, 1. Total, 5 species, 15 individuals.—MRS. CHARLES S. HARTWELL.

Brooklyn, N. Y. (Prospect Park).—Dec. 25; 8 to 11 A.M.; 1.30 to 4.30 P.M. Partly cloudy, clear between 10 and 11 A.M.; two inches of snow; wind south, light; temp. 35° to 45°. Black-crowned Night Heron, 3; Downy Woodpecker, 5; Starling, 82; Purple Finch, 1; Pine Siskin, 11; White-throated Sparrow, 27 (some singing); Song Sparrow, 3; Fox Sparrow, 1; Carolina Wren, 1; Brown Creeper, 2; Golden-crowned Kinglet, 6; Hermit Thrush, 1; Robin, 1. Total, 13 species, 144 individuals.—EDWARD FLEISCHER.

Prospect Park, Brooklyn, N. Y.—Dec. 25; 9 to 11.30 A.M. Partially overcast; light covering of snow; wind southwest, light; temp., 35°. Black-crowned Night Heron, 3; Pigeon Hawk, 1; Screech Owl, 1; Downy Woodpecker, 3; Crow, 1; Starling, 24; Pine Siskin, 8; White-throated Sparrow, 30; (5 singing) Junco, 3; Song Sparrow, 2; Fox Sparrow, 3; Brown Creeper, 1; Golden-crowned Kinglet, 2; Hermit Thrush, 1; Robin, 2. Total, 15 species, 85 individuals. December 26, Carolina Wren, 1.—KATE P. and E. W. VIETOR.

Rockaway Park to Point and back, New York City.—Dec. 28; 9.10 A.M. to 4.10 P.M. Weather fine; brisk to light southwest wind; ground mostly bare of snow; temp., 35° to 40°. Horned Grebe, 70; Loon, 1; Herring Gull, 300; Old Squaw, 100; White-winged Scoter, 20; Horned Lark, 16; Crow, 20; Pine Siskin, 500. Total, 8 species, about 1,025 individuals.—CHARLES H. ROGERS.

Mt. Sinai, Long Island, N. Y.—Dec. 26; all day. Clear; heavy cumulus clouds; one inch of snow on ground; rather strong northwest wind; temp., 33° to 40°. Horned Grebe, 6; Loon, 2; Kittiwake Gull, 9; Great Black-backed Gull, 1; Herring Gull, 300; Black Duck, 6; Old Squaw, 8; White-winged Scoter, 40; Bob-white, 2; Ring-neck Pheasant, 1; Red-shouldered Hawk, 1; Horned Lark, 15; Blue Jay, 2; Crow, 30; Meadowlark, 10; Purple Finch, 9; Goldfinch, 4; Junco, 60; Song Sparrow, 14; Winter Wren, 4; Chickadee, 25. Total, 21 species, 548 individuals. Country visited, Sound beach, harbor shores, and woods along streams.—GERTRUDE ANNA WASHBURN and ROBERT CUSHMAN MURPHY.

Western shore of Shelter Island, N. Y.—Dec. 27; 8.40 A.M. to 4.45 P.M. Sunny in morning, overcast in afternoon; ground bare, except for snow-patches in sheltered spots; wind west, brisk; temp., at start 27°. Horned Grebe, 8; Loon, 2; Great Black-backed Gull, 2; Herring Gull, 200; Red-breasted Merganser, 5; Black Duck, 30; Greater Scaup Duck, 300; American Golden-eye, 12; Old Squaw, 300; American Scoter, 12; White-winged Scoter, 200; Surf Scoter, 15; Bob-white, 6; Marsh Hawk, 1; Red-tailed Hawk, 1; Kingfisher, 4; Downy Woodpecker, 4; Flicker, 5; Horned Lark, 10; Prairie Horned Lark, 2; Crow, 25; Starling, 2; Meadowlark, 3; Am. Crossbill, 2; Redpoll, 3; Goldfinch, 10; Pine Siskin, 2; White-throated Sparrow, 7; Tree Sparrow, 50; Song Sparrow, 20; Myrtle Warbler, 50; Brown Creeper, 1; Chickadee, 25; Golden-crowned Kinglet, 2; Hermit Thrush, 3; Robin, 12; Bluebird, 10. Total, 37 species, 1,346 individuals.—ROY LATHAM, FRANCIS HARPER and CLINTON G. ABBOTT.

Orient, Long Island.—Dec. 20; 8 A.M. to 4.30 P.M. Clear; wind west, very strong; ground bare; temp., 30° to 35°. Horned Grebe, 37; Loon, 13; Red-throated Loon, 2; Black-backed Gull, 1; Herring Gull, 461; Red-breasted Merganser, 89; Mallard, 1; Black Duck and Red-legged Black Duck, 42; Greater Scaup Duck, 220; American Golden-eye, 5; Bufflehead, 8; Old Squaw, 609; American Scoter, 5; White-winged

Scoter, 179; Surf Scoter, 18; Bittern, 1; Wilson's Snipe, 1; Bob-white, 30; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Sparrow Hawk, 1; Screech Owl, 2; Downy Woodpecker, 1; Flicker, 16; Horned Lark, 551; Crow, 306; Fish Crow, 9; Starling, 27; Meadowlark, 157; Goldfinch, 17; Pine Siskin, 70; Snowflake, 19; Lapland Longspur, 1; Tree Sparrow, 64; Junco, 25; Song Sparrow, 42; Swamp Sparrow, 1; Fox Sparrow, 1; Northern Shrike, 1; Myrtle Warbler, 32; American Pipit, 55; Carolina Wren, 2; Winter Wren, 2; Chickadee, 61; Golden-crowned Kinglet, 23; Ruby-crowned Kinglet, 1; Hermit Thrush, 1; Robin, 22. Total, 50 species, 3,110 individuals. There has been an unusual occurrence of Pipits this winter. Myrtle Warblers are less common than in many winters.—HARRY, FRANK and ROY LATHAM.

Gardiner's Island, N. Y.—Dec. 25; 8 A.M. to 4.30 P.M. Cloudy; wind northwest, fresh to brisk, ground bare and free from frost; temp., 33° to 40°. Horned Grebe, 7; Loon, 16; Red-throated Loon, 1; Brunnick's Murre, 1; Kittiwake, 1; Great Black-backed Gull, 1; Herring Gull, 30; Red-breasted Merganser, 116; Hooded Merganser, 3; Mallard, 26; Black Duck and Red-legged Black Duck, 672; Redhead, 2; Greater Scaup Duck, 1,500; American Golden-eye, 50; Bufflehead, 3; Old Squaw, 160; American Scoter, 8; White-winged Scoter, 115; Surf Scoter, 158; Great Blue Heron, 1; Bob-white, 35; Pheasant, 55; Marsh Hawk, 10; Cooper's Hawk, 1; Goshawk, 2; Red-tailed Hawk, 5; Red-shouldered Hawk, 4; Rough-legged Hawk, 3; Bald Eagle, 1; Duck Hawk, 1; Long-eared Owl, 2; Downy Woodpecker, 5; Flicker, 18; Horned Lark, 32; Crow, 235; Fish Crow, 8; European Starling, 8; Meadowlark, 40; Pine Grosbeak, 1; White-winged Crossbill, 1; Goldfinch, 4; Pine Siskin, 32; White-throated Sparrow, 2; Tree Sparrow, 18; Junco, 5; Song Sparrow, 11; Tree Swallow, 2 (a genuine surprise); Myrtle Warbler, 7; Carolina Wren, 15; Winter Wren, 1; White-breasted Nuthatch, 20; Chickadee, 55; Golden-crowned Kinglet, 18; Ruby-crowned Kinglet, 1; Robin, 2. Total, 56 species, 3,583 individuals.—ROY, HARRY and FRANK LATHAM and GEORGE GRIFFIN.

West One Hundred and Thirtieth Street Ferry, Edgewater, Palisade Park, Leonia and Nordhoff, N. J.—Dec. 26; 1.45 to 5 P.M. Fine, occasionally cloudy; ground muddy, partly snow-covered; wind west, very strong; temp., 45°. Herring Gull, 100; Red-tailed Hawk, 3; Downy Woodpecker, 1; Starling, 3; White-throated Sparrow, 25; Tree Sparrow, 7; Junco, 8; Song Sparrow, 10; Golden-crowned Kinglet, 2. Total, 9 species, 159 individuals.—GEORGE E. HIX.

Bloomfield and Newark, N. J.—Dec. 25, 10 A.M. to 2 P.M. Cloudy; ground covered with snow; wind southwest, light; temp., 30° to 50°. Marsh Hawk, 1; Crow, 4; Downy Woodpecker, 1; Starling, 119; White-throated Sparrow, 4; Junco, 1; Song Sparrow, 3; Brown Creeper, 1; Golden-crowned Kinglet, 2; Hermit Thrush, 1; Robin, 5. Total, 11 species, 142 individuals.—LOUIS S. KOHLER.

Newark, N. J. (Branch Brook Park).—Dec. 25; 11 A.M. to 2 P.M. Partly cloudy; wind southwest, fresh; ground covered with snow, except in exposed places; temp., 40° to 45°. Sharp-shinned Hawk, 1; Blue Jay, 1; Crow, 1; Starling, 20; Goldfinch, 1; Pine Siskin, 3; White-throated Sparrow, 6; Tree Sparrow, 2; Junco, 4; Song Sparrow, 3; Brown Creeper, 2; Chickadee, 1; Golden-crowned Kinglet, 1; Robin, 1. Total, 14 species, 47 individuals.—CHAS. A. MERRILL.

Troy Hills, N. J.—Dec. 28; 7.30 A.M. to 12.30 P.M. Clear, ground partly covered with snow; wind west, light; temp., 32° to 50°. Marsh Hawk, 3; Red-tailed Hawk, 1; Red-shouldered Hawk, 2; Downy Woodpecker, 2; Red-headed Woodpecker, 2; Northern Flicker, 2; Blue Jay, 13; Crow, 40; Starling, 3; Meadowlark, 15; Goldfinch, 3; White-throated Sparrow, 12; Tree Sparrow, 75; Song Sparrow, 11; Slate-colored Junco, 1; Winter Wren, 2; White-breasted Nuthatch, 3; Tufted Titmouse, 2; Black-capped Chickadee, 8; A Kingfisher was seen on December 26. Total, 19 species, 200 individuals.—BENJ. F. HOWELL.

Plainfield, N. J.—Dec. 25; 9.30 A.M. to 6 P.M. Weather mild, partly cloudy; about

two inches of snow on ground. Sharp-shinned Hawk, 1; Red-tailed Hawk, 2; Sparrow Hawk, 1; Barred Owl, 1; Downy Woodpecker, 10; Flicker, 3; Blue Jay, 17; Crow, 50; Fish Crow, 2; European Starling, 50; Meadowlark, 16; Bronzed (?) Grackle, 1; Purple Finch, 2; Am. Crossbill, 9; Goldfinch, 9; Pine Siskin, 90; White-throated Sparrow, 15; Tree Sparrow, 12; Junco, 80; Song Sparrow, 12; Swamp Sparrow, 2; Fox Sparrow, 1; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 6; Tufted Titmouse, 5; Chickadee (*P. atricapillus*), 13; Hermit Thrush, 2; Robin, 1. Total, 29 species, 416 individuals. Before this winter the Fox Sparrow had never been seen near Plainfield between December 2 and March 1.—W. DEW. MILLER.

Morristown, N. J.—Dec. 25; 8.45 to 11 A.M. Partly cloudy; wind southwest, light; ground partly covered with snow; temp., 38°. Red-shouldered Hawk, 1; Kingfisher, 1; Downy Woodpecker, 6; Red-headed Woodpecker, 1; Blue Jay, 35; Crow, 50; Starling, 2; Meadowlark, 4; Purple Finch, 7; Goldfinch, 9; Pine Siskin, 6; White-throated Sparrow, 13; Tree Sparrow, 15; Junco, 17; Song Sparrow, 4; Carolina Wren, 1; White-breasted Nuthatch, 6; Tufted Titmouse, 2; Chickadee, 9; Golden-crowned Kinglet, 5; Bluebird, 2. Total, 21 species, 196 individuals.—R. C. CASKEY.

Morristown, N. J.—Dec. 25; 10 A.M. to 12 M. Partly cloudy; ground covered with light snow; wind southwest, light; temp., 38°. Red-shouldered Hawk, 1; Crow, 11; Blue Jay, 20; Purple Grackle, 5; Red-headed Woodpecker, 1; Downy Woodpecker, 3; Junco, 47; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Song Sparrow, 1; Fox Sparrow, 1; Chickadee, 1; White-throated Sparrow, 5. Total, 14 species, 99 individuals.—ANNA A. and FRANK D. VOGT.

Princeton, N. J.—Dec. 25; 9.15 A.M. to 1.30 P.M.; 3 to 5 P.M. Clear to cloudy; wind northwest, light; ground snow-covered, average depth, four or five inches; temp., 28°. Red-tailed Hawk, 1; Red-shouldered Hawk, 2; American Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 1; Horned Lark, 1; Blue Jay, 13; Crow, 500; Purple Finch, 46; Goldfinch, 37; White-throated Sparrow, 1; Tree Sparrow, 225; Junco, 200; Song Sparrow, 50; Cardinal, 18; Carolina Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 16; Chickadee, 7; Golden-crowned Kinglet, 2. Total, 22 species, 1,132 individuals.—WILLIAM M. NORRIS, JR.

Asbury Park, N. J. (Around Deal Lake).—Dec. 26; 9 to 11.45 A.M. Clear; ground snow-covered (not deep); wind west, moderately strong; temp., 42°. Herring Gull, 25; Downy Woodpecker, 3; Crow, 7; Tree Sparrow, 1; Song Sparrow, 3; Junco, 2; Carolina Wren, 1; Brown Creeper, 1; Tufted Titmouse, 2; Chickadee (heard). Total 10 species, about 46 individuals.—BESS BERNHARD and EMMA VAN GILLUWE.

Hackettstown, N. J.—Dec. 27; 8.45 to 11.30 A.M. Cloudy; ground covered with crust of snow; wind south; temp., 30°. Downy Woodpecker, 2; Flicker, 1; Blue Jay, 1; Crow, 3; Purple Finch, 3; Goldfinch, 43; Tree Sparrow, 8; Junco, 10; Song Sparrow, 9; Myrtle Warbler, 1; White-breasted Nuthatch, 1; Chickadee, 2; Golden-crowned Kinglet, 1; Robin, 1. Total, 14 species, 86 individuals.—MARY PIERSON ALLEN.

Newfield, N. J.—Dec. 25; 9.30 A.M. to 2.50 P.M. Cloudy; light rain in afternoon; wind south, very light; ground covered with six to fifteen inches of snow; temp., 40°. Cooper's Hawk (?), 1; Red-shouldered Hawk (?), 1; Downy Woodpecker, 6; Crow, 6; Blue Jay, 4; Meadowlark, 3; Goldfinch, 3; Tree Sparrow, 30; Junco, 100; Song Sparrow, 10; Robin, 1; Chickadee, 8; Bluebird, 5. Total, 12 species, 180 individuals.—WM. W. FAIR.

Moorestown, N. J.—Dec. 28; 6.33 to 7.40 A.M.; 8.05 A.M. to 12.45 P.M.; 1.30 to 6.30 P.M. Cloudy, becoming clear; ground generally snow-covered; wind west, light; temp., 32°. Turkey Vulture, 1; Marsh Hawk, 1; Red-tailed Hawk, 4; Red-shouldered Hawk, 1; Sparrow Hawk, 6; Hairy Woodpecker, 3; Downy Woodpecker, 6; Flicker, 1; Horned Lark, 20; Crow, 92; Meadowlark, 29; Purple Finch, 2; Goldfinch, 22; White-throated Sparrow, 13; Tree Sparrow, 30; Snowbird, 104; Song Sparrow, 39; Cardinal, 8; Winter,

Wren, 4; Brown Creeper, 3; White-breasted Nuthatch, 1; Tufted Titmouse, 7; Chickadee, 2; Catbird, 1. Total, 24 species, 400 individuals.—WILLIAM B. EVANS.

Easton, Pa.—Dec. 25; 8.30 A.M. to 12.15 P.M. To 10 A.M. cloudy, then clear; wind northwest, light, ground covered with snow, some of the more exposed places bare; temp., 35° at start, 41° at return. Downy Woodpecker, 1; Crow, 4; Purple Finch, 1; Goldfinch, 2; Tree Sparrow, 16; White-throated Sparrow, 2; Junco, 18; Song Sparrow, 19; Cardinal, 1; Winter Wren, 1; White-breasted Nuthatch, 1; Robin, 1. Total, 12 species, 67 individuals.—EDWARD J. F. MARX.

Chestnut Hill, Pa. (along the Cresheim Creek).—Dec. 26; 1.40 to 4.40 P.M. Cloudy; ground covered with snow; strong wind from the northwest; temp., 40°. Red-shouldered Hawk, 1; Flicker, 6; Downy Woodpecker, 5; Cardinal, 7; Junco, 30; Goldfinch, 4; White-throated Sparrow, 17; Tree Sparrow, 25; Song Sparrow, 6; Myrtle Warbler, 5; Carolina Wren, (one in song), 4; Winter Wren, 2; Chickadee, 7; Golden-crowned Kinglet, 1; Bluebird, 2. Total, 15 species, 122 individuals. Recently I saw a flock of about fifteen English Starlings in the neighborhood of Germantown.—GEORGE LEAR.

Philadelphia, Pa., Woodlands Cemetery (City ornithology).—Dec. 26; 2.30 to 4 P.M. Cloudy; ground covered with light snow; high, northwest wind; temp., 36°. Downy Woodpecker, 2; Crow, 4; Goldfinch, 1; White-throated Sparrow, 40; Junco, 25; Song Sparrow, 14; Winter Wren, 1; Robin, 1. Total, 8 species, 84 individuals.—THOMAS R. HILL.

Philadelphia, Pa., Delaware River Meadows, Bridesburg and Frankford.—Dec. 25; 9.17 A.M. to 1.25 P.M. Overcast at start, afterward clear, sun occasionally obscured by dull clouds; five inches of soft snow; wind south, calm, barely perceptible; temp., 40°. Herring Gull, 3; Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Rough-legged Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Crow, 51; Fish Crow, 2; Meadowlark, 10 (flock); Rusty Grackle, 4; Purple Grackle, 1; Purple Finch, 4; Goldfinch, 7; Pine Siskin, 3; White-throated Sparrow, 18; Tree Sparrow, 14; Field Sparrow, 3; Junco, 34; Song Sparrow, 35; Swamp Sparrow, 1; Fox Sparrow, 1; Towhee, 1; Cardinal, 1; Titlark, 11 (flock); Carolina Wren, pair; Winter Wren, 2; Tufted Titmouse, 5; Chickadee, 2; Brown Creeper, 2; Golden-crowned Kinglet, 4. Total, 30 species, 227 individuals. The Purple Grackle and Towhee were not wounded individuals left behind in the migrations for they both were capable of extended flight.—RICHARD F. MILLER.

Kennett Square, Pa.—Dec. 25; 9 A.M. to 4 P.M. Slightly clouded yet sunny; ground covered with two to five inches of snow; wind very slight, southwest; temp., 44°. Red-tailed Hawk, 4; Turkey Buzzard, 1; Downy Woodpecker, 12; Flicker, 1; Crow, 1,000; Meadowlark, 1; Goldfinch, 5; Tree Sparrow, 50; Junco, 30; Song Sparrow, 15; Cardinal, 3; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 1; Chickadee, 15; Golden-crowned Kinglet, 20. Total, 16 species, 1,173 individuals.—HORACE J. GRUBB.

Kennett Square, Pa.—Dec. 25; 1 to 5 P.M. Cloudy; temp., 42°. Turkey Buzzard, 3; Marsh Hawk, 2; Cooper's Hawk, 1; Red-tailed Hawk, 1; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 1; Crow, 27; Meadowlark, 16; Tree Sparrow, 55; Junco, 41; Song Sparrow, 11; Cardinal, 1; Winter Wren, 3; White-breasted Nuthatch, 2; Tufted Titmouse, 1; Chickadee, 1. Total, 17 species, 168 individuals.—C. J. PENNOCK.

Radnor Township, Delaware Co., Pa.—Dec. 21; 9.15 A.M. to 2.30 P.M. Clear; ground bare; wind northwest, temp., 30° at start. Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Flicker, (heard); Blue Jay, 2; Crow, 15; Meadowlark, 2; Purple Finch, 2; Goldfinch, 2; Vesper Sparrow, 6; White-throated Sparrow, 1; Tree Sparrow, 35; Junco, 75; Song Sparrow, 15; Cardinal, 4; Carolina Wren, 5; Winter Wren, 4; Brown Creeper, 2; White-breasted Nuthatch, 4; Black-capped Chickadee, 1; Golden-crowned Kinglet, 1. Total, 23 species, 180 individuals.—ALFRED C. REDFIELD.

Concordville, Pa.—Dec. 28; 1 to 4 P.M. Clear; ground covered with snow; slight

west wind; temp., 50°. Mourning Dove, 2; Marsh Hawk, 2; Sparrow Hawk, 2; Turkey Vulture, 3; Screech Owl, 3; Downy Woodpecker, 2; Flicker, 1; Meadowlark, 15; Crow, 20; Blue Jay, 1; Goldfinch, 27; Pine Finch, 20; Vesper Sparrow, 1; White-throated Sparrow, 12; Tree Sparrow, 30; Junco, 40; Song Sparrow, 25; Cardinal, 2; Carolina Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 1; Chickadee, 2; Golden-crowned Kinglet, 4. Total, 24 species, 218 individuals.—KATHARINE R. STYER and ELIZABETH P. STYER.

Lititz, Pa. (northern Lancaster Co., and valley of Hammer Creek).—Dec. 27; 8 A.M. to 5 P.M. Clear; ground snow-covered; no wind; temp., 26° to 35°. Ruffed Grouse, 1; Turkey Buzzard, 3; Cooper's Hawk, 1; Red-tailed Hawk, 1; Sparrow Hawk, 2; Screech Owl, 1; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 10; Flicker, 1; Horned Lark, 30; Blue Jay, 15; Crow, 2,500; Meadowlark, 35; Goldfinch, 8; Tree Sparrow, 215; Junco, 140; Song Sparrow, 3; Cardinal, 18; Northern Shrike, 3; Winter Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 7; Black-capped Chickadee, 21; Golden-crowned Kinglet, 7. Total, 25 species, 3,028 individuals.—HERBERT H. BECK and ELMER E. KANTZ.

Columbia, Pa.—Dec. 25; 9 A.M. to 12 M. Cloudy; snow on ground; temp., 40°. Sparrow Hawk, 1; Downy Woodpecker, 1; Blue Jay, 1; Crow, 100; Song Sparrow, 20. Total, 5 species, 123 individuals.—WM. M. FLANAGAN and WM. ROCHOW.

Pittsburgh, Pa., McKinley Park.—Dec. 25; 11.30 A.M. to 1.30 P.M. Clear; ground bare; wind southwest, strong; temp., 40°. Downy Woodpecker, 1; Junco, 4; Song Sparrow, 3; Cardinal, 2. Total, 4 species, 10 individuals.—MILO H. MILLER.

Summerton, S. C.—Dec. 24; 10.15 A.M. to 1.30 P.M. Clear at start, but cloudy at return; ground bare; temp., 46°. Killdeer, 8; Turkey Vulture, 2; Red-tailed Hawk, 1; Red-cockaded Woodpecker, 2; Flicker, 4; Phoebe, 1; Blue Jay, 22; Crow, 6; Red-winged Blackbird, 1; Vesper Sparrow, 11; White-throated Sparrow, 23; Junco, 5; Song Sparrow, 50; Towhee, 12; Cardinal, 9; Loggerhead Shrike, 1; Myrtle Warbler, 8; American Pipit, 51; Mockingbird, 5; Brown Thrasher, 4; Carolina Wren, 11; Brown-headed Nuthatch, 1; Tufted Titmouse, 1; Ruby-crowned Kinglet, 13; Hermit Thrush, 6; Bluebird, 5. Total, 26 species, 263 individuals.—EDWARD S. DINGLE.

Palma Sola, Fla.—Dec. 25; all day. Loon, 2; Laughing Gull, 4; Royal Tern, 1; Black Skimmer, 14; Florida Cormorant, 20; Brown Pelican, 40; Red-breasted Merganser, 16; Wood Ibis, 1; Florida Great Blue Heron, 5; Louisiana Heron, 12; Little Blue Heron, 7; Semipalmated Sandpiper, 5; Killdeer, 10; Black-bellied Plover, 2; Florida Bob-white, 15; Ground Dove, 1; Turkey Vulture, 13; Black Vulture, 12; Bald Eagle, 2; Belted Kingfisher, 2; Red-bellied Woodpecker, 3; Phoebe, 1; Florida Jay, 1; Loggerhead Shrike, 2; Palm Warbler, 30; Maryland Yellow-throat, 1; Marian's Marsh Wren, 2; Blue-Gray Gnatcatcher, 14; Mockingbird, 3. Total, 29 species, 241 individuals.—CARLOS EARLE.

Knoxville, Tenn.—Dec. 26; 7 to 10 A.M. Clouds and sunshine; ground covered with light snow; wind northwest, rather heavy; temp., 33°. Crow, 5; Junco, 4; Song Sparrow, 1; Cardinal, 3; Chickadee, 3; Carolina Wren, 1; Bluebird, 4. Total, 7 species, 21 individuals.—MAGNOLIA WOODWARD.

Cadiz, Ohio.—Dec. 25; 8.20 A.M. to 12.20 P.M.; 2.25 to 4.15 P.M. Partly cloudy; ground bare; wind south, light; mean temp., 42°. Walked twelve miles, rode bicycle eight miles. Bob-white, 27; Red-tailed Hawk, 3; Hairy Woodpecker, 3; Downy Woodpecker, 12; Red-headed Woodpecker, 4; Red-bellied Woodpecker, 10; Flicker, 2; Prairie Horned Lark, 2; Blue Jay, 3; Crow, 3; Goldfinch, 2; Tree Sparrow, 110; Junco, 18; Song Sparrow, 23; Cardinal, 9; Carolina Wren, 16; White-breasted Nuthatch, 14; Tufted Titmouse, 13; Chickadee, 18; Bluebird, 8. Total, 20 species, about 300 individuals.—HARRY B. MCCONNELL.

Cadiz, Ohio.—Dec. 27; 3.15 to 4.15 P.M. Clear; ground bare; wind west, rather

strong; temp., 43°. Red-tailed Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Tree Sparrow, 10; Song Sparrow, 15; Cardinal, 5; Robin, 1. Total, 7 species, 35 individuals.—HARRY B. McCONNELL and MISS ISABEL McCONNELL.

Cadiz, Ohio.—Dec. 25; 9 to 10 A.M. Partly cloudy; ground bare, wind south, light; temp., 40°. Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-headed Woodpecker, 8; Crow, 1; Tree Sparrow, 12; Song Sparrow, 9; Cardinal, 2; White-breasted Nuthatch, 4; Chickadee, 3; Bewick's Wren, 1. Total, 10 species, 44 individuals. On December 24, a Robin sang for ten minutes near my home.—EMMA ELLISON.

Canton, Ohio.—Dec. 25; 8 A.M. to 3 P.M. Morning clear, afternoon growing cloudy; ground bare; wind southwest, light; temp., 38°. Belted Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 8; Flicker, 1; Blue Jay, 3; Goldfinch, 3; Tree Sparrow, 355; Slate-colored Junco, 140; Song Sparrow, 16; Cardinal, 18; Brown Creeper, 3; White-breasted Nuthatch, 14; Tufted Titmouse, 27; Black-capped Chickadee, 1. Total, 14 species, 591 individuals.—EDWARD D. KIMES.

Canton, Ohio.—Dec. 25; 8.30 A.M. to 12 M. Clear and bright after an all-night rain; ground bare; wind light to moderate, from southwest. Red-tailed Hawk, 1; Hairy Woodpecker, 3; Blue Jay, 5; Tree Sparrow, 90; Slate-colored Junco, 200; Song Sparrow, 12; White-breasted Nuthatch, 7; Chickadee, 4; Golden-crowned Kinglet, 10; Bluebird, 1. Total, 11 species, 336 individuals.—JAS. A. CALHOUN.

Madison, Lake Co., Ohio.—Dec. 27; 10 A.M. to 12.30 P.M.; 2 to 4 P.M. Village to Grand River and turning; distance about four miles. Strong, west wind; partly cloudy; snow and ground thawing; some ice on river; temp., 39° to 42°. Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; American Sparrow Hawk, 1; Downy Woodpecker, 3; Tree Sparrow, 54; Junco, 45; White-breasted Nuthatch, 4. Total, 7 species, 109 individuals. On December 13, saw a Red-bellied Woodpecker; December 20, a flock of fourteen Cowbirds stayed in vicinity several hours; December 21, saw one Brown Creeper.—CARL C. LAWSON.

Madison, Lake Co., Ohio.—Dec. 25; 9.30 to 11.45 A.M. Brisk, west to northwest wind; cloudy till ten o'clock; ground bare and wet; temp., 36° to 40°. American Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Northern Flicker, 2; Blue Jay, 1; Tree Sparrow, 15; Junco, 20; Song Sparrow, 6; White-breasted Nuthatch, 5; Chickadee, 2. Total, 10 species, 55 individuals.—CARL C. LAWSON.

Madison, Lake Co., Ohio.—Dec. 26; 9 A.M. to 4 P.M. From village, north to Lake Erie, and return. Distance covered about twelve miles. Ground lightly covered with snow, and snow flurries all day; brisk, northwest wind; lake clear of ice; temp., 30°. Herring Gull, 4; Downy Woodpecker, 5; Blue Jay, 1; Meadowlark, 3; Purple Finch, 1; Goldfinch, 75; Junco, 25; Song Sparrow, 4; Migrant Shrike, 1; White-breasted Nuthatch, 4; Tufted Titmouse, 2; Chickadee, 6. Total, 12 species, 131 individuals.—CARL C. LAWSON.

Miamisburg, Ohio.—Dec. 25; 8 to 10 A.M. Light fog; ground bare; wind west, light; temp., 30°. Bob-white, 10; Sharp-shinned Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 4; Screech Owl, 1; Hairy Woodpecker, 10; Downy Woodpecker, 7; Flicker, 9; Prairie Horned Lark, 57; Blue Jay, 8; Crow, 26; White-crowned Sparrow, 3; Tree Sparrow, 75; Slate-colored Junco, 63; Song Sparrow, 34; Cardinal, 15; Carolina Wren, 7; Tufted Titmouse, 8; Chickadee, 48. Total, 19 species, 388 individuals.—REV. W. I. ECK.

New Paris, Ohio.—Dec. 27; 3 to 5 P.M. Clear; ground bare; wind west, strong; temp., 40°. Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 200; Blue Jay, 1; Junco, 5; Song Sparrow, 3; Cardinal, 2; Chickadee, 2; Golden-crowned Kinglet, 2. Total, 9 species, 217 individuals.—HAZEL S. and ADA HEATH.

New Paris, Ohio.—Dec. 27; 9.30 to 10.30 A.M. Clear; ground bare; wind west, strong; temp., 40°. Mourning Dove, 1; Red-shouldered Hawk, 1; Screech Owl, 1;

Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 2; Crow, 13; Tree Sparrow, 6; Junco, 36; Song Sparrow, 4; Cardinal, 6; White-breasted Nuthatch, 1; Tufted Titmouse, 2; Chickadee, 2. Total, 14 species, 77 individuals.—RUTH and LOREN C. PETRY.

Rinard's Mills, Ohio.—Dec. 23; 9 A.M. to 1 P.M. Clear and warm; wind southwest; temp., 40°. Bob-white (10 coveys), 153; Ruffed Grouse, 4; Red-tailed Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Yellow-bellied Sapsucker, 1; Pileated Woodpecker, 1; Goldfinch, 8; Field Sparrow, 3; Slate-colored Junco, 5; Song Sparrow, 8; Towhee, 2; Cardinal, 38; Carolina Wren, 5; Winter Wren, 4; White-breasted Nuthatch, 2; Tufted Titmouse, 15; Chickadee, 13; Bluebird, 11. Total, 20 species, 281 individuals.—ROBERT M. LEE.

Winchester, Adams Co., Ohio.—Dec. 25; 7 A.M. to 12 M.; 3.30 to 4.30 P.M. Partly clear; ground bare; wind southwest, light; temp., forenoon, 36° to 43°. Mourning Dove, 35; Sharp-shinned Hawk, 2; Cooper's Hawk, 3; American Sparrow Hawk, 1; Northern Hairy Woodpecker, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 6; Flicker, 8; Blue Jay, 2; Crow, 14; Cowbird, 30; Goldfinch, 7; Tree Sparrow, 60; Slate-colored Junco, 60; Song Sparrow, 24; Towhee, 2; Cardinal, 15; Carolina Wren, 15; White-breasted Nuthatch, 2; Tufted Titmouse, 5; Carolina Chickadee, 13; Bluebird, 9. Total, 22 species, 368 individuals. I saw the Mockingbird in this latitude every month of the year 1907. They are on the increase here. Saw one yesterday.—C. L. CHAPMAN.

Youngstown, Ohio.—Dec. 25; 7.30 A.M. to 3.30 P.M. Clear; ground bare; wind west; temp., 38° to 40°. Distance walked seventeen miles. Ruffed Grouse, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Barred Owl, 1; Great-horned Owl, 3; Hairy Woodpecker, 2; Downy Woodpecker, 3; Pileated Woodpecker, 1; Red-bellied Woodpecker, 2; Blue Jay, 18; Goldfinch, 4; Tree Sparrow, 150; Junco, 15; Song Sparrow, 9; Cardinal, 8; Carolina Wren, 4; Brown Creeper, 1; White-breasted Nuthatch, 19; Tufted Titmouse, 6; Black-capped Chickadee, 17; Golden-crowned Kinglet, 3; Total, 21 species, 270 individuals.—GEORGE L. FORDYCE.

Xenia, Ohio.—Dec. 25; 9 to 10.30 A.M. Clear; ground bare; wind west, light; temp., 36°. Bob-white, 10; Downy Woodpecker, 2; Red-bellied Woodpecker, 1; Blue Jay, 2; Crow, 3; Tree Sparrow, 25; Slate-colored Junco, 30; Song Sparrow, 8; Cardinal, 2; Bewick's Wren, 2; Tufted Titmouse, 1; Black-capped Chickadee, 1. Total, 12 species, 87 individuals.—FLORA KEITER.

White Water River Gorge, Richmond, Ind.—Dec. 25; 9 A.M. to 1 P.M. Cloudy; wind southwest, light; ground bare; temp., 28°. Red-shouldered Hawk, 1; Kingfisher, 4; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-bellied Woodpecker, 1; Blue Jay, 10; Crow, 30; Goldfinch, 6; Tree Sparrow, 50; Junco, 6; Song Sparrow, 16; Chewink (male), 1; Cardinal, 4; Brown Creeper, 3; White-breasted Nuthatch, 1; Titmouse, 6; Black-capped Chickadee, 8; Golden-crowned Kinglet, 2; Ruby-crowned Kinglet, 1; Total, 19 species, 147 individuals.—MR and MRS. PERCIVAL BROOKS COFFIN, M. BAXTER and MRS. J. G. SUTTON.

Detroit, Mich., at Palmer Park.—Dec. 25; 10 A.M. to 12 M. Cloudy, misty, threatening snow; three inches of snow on ground; wind north; about ten miles; temp., 33°. Junco, 4; Tree Sparrow, 3. **Belle Isle Park.**—Dec. 27. Conditions much the same as above, except wind blowing twenty miles. Herring Gull, 15; Red-headed Woodpecker, 1; Hairy Woodpecker, 1; Crow, 6; Blue Jay, 1; White-breasted Nuthatch, 4; Tufted Titmouse, 1; Chickadee, 1. Total, for two days, 10 species, 37 individuals.—JEFFERSON BUTLER.

Kalamazoo, Mich.—Dec. 25; 11 A.M. to 1 P.M. Cloudy; light snow; ground partly bare; wind northwest, moderate; temp., 30°. Blue Jay, 2; Crow, 40; Lapland Longspur, 75; White-breasted Nuthatch, 1. Total, 4 species, 118 individuals.—WM. E. PRAEGER.

Port Sanilac, Mich.—Dec. 28; 10.30 A.M. to 1 P.M. Bright sunshine; two to fourteen inches snow, crusted; wind west and light, changing to south and stronger; temp., 28° to 36°. Herring Gull, 2; American Merganser, 7; Downy Woodpecker, 2; Crossbill (sp.), 10; Junco, 75; Song Sparrow, 4; Chickadee, 25. Total, 7 species, 125 individuals.—ETHEL B. CHASE, MRS. JOHN S. THOMSON and HARRIET W. THOMSON.

Benzonia, Benzie Co., Mich.—Dec. 28; 9 A.M. to 12 M. Snowing slightly, increasing later; wind northwest, snow ten inches deep; temp., 28°. Herring Gull, flock of 48; Bob-white, flock of 10; Hairy Woodpecker, Downy Woodpecker, Blue Jay, Redpoll, White-breasted Nuthatch, Chickadee. On the evening of December 27, I heard four Horned Owls.—ELIHU LINKLETTER.

Chicago, Ill. (Jackson Park and Lake Front).—Dec. 25; 11 A.M. to 1 P.M. Partly cloudy; ground bare; wind northwest, strong; temp., 28°. Herring Gull, 50; Ring-billed Gull, 15; Bonaparte's Gull, 8; Red-breasted Merganser, 5; Blue Jay, 2; Tree Sparrow, 25. Total, 6 species, 105 individuals.—EDW. E. ARMSTRONG.

Jackson Park and vicinity, Chicago, Ill.—Dec. 25; 1 to 4 P.M. Cloudy; ground bare; wind west to northwest, very strong; temp., 32°. Herring Gull, 35; American Golden-eye, 3; Downy Woodpecker, 1. Total, 3 species, 39 individuals. Redpolls were seen December 20; Tree Sparrows and Juncos, December 26.—F. A. PENNINGTON.

Riverside, Ill.—Dec. 24; 10 A.M. to 1.20 P.M. Cloudy; ground bare; wind brisk, southwest; temp., 36° to 42°. Herring Gull, 11; Ring-billed Gull, 3; Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Blue Jay, 12; Purple Finch, 9; Redpoll, 10; Tree Sparrow, 9; Junco, 3; Cardinal, 4; Brown Creeper, 4; White-breasted Nuthatch, 3; Tufted Titmouse, 4. Total, 14 species, 79 individuals.—N. L. PARTRIDGE.

Desplains River, from Desplains to Aptakisic, across country to Highwood, Ill.—Dec. 24; 6.25 A.M. to 6 P.M. Generally cloudy; ground bare; brisk, southwest wind; temp., 38° to 47°. Distance twenty-five miles. Herring Gull, 3; Ring-billed Gull, 4; Sharp-shinned Hawk, 1; Rough-legged Hawk, 1; Hairy Woodpecker, 5; Downy Woodpecker, 15; Prairie Horned Lark, 1; Blue Jay, 15; Crow, 78; Redpoll, 155; Goldfinch, 15; Siskin, 4; Tree Sparrow, 104; Junco, 5; Song Sparrow, 4; Cardinal, 2; Brown Creeper, 8; Nuthatch, 11; Chickadee, 77; Golden-crowned Kinglet, 4. Total, 20 species, 512 individuals.—FRANK C. GATES and J. G. SINCLAIR.

Lake Co., Ill., Beach through Waukegan to Fort Sheridan and Graceland Cemetery, Chicago, Ill.—Dec. 25; 5.30 A.M. to 4 P.M. Cloudy; ground bare; wind west to northwest, rather brisk; temp., 26° to 29°. Herring Gull, 164; Ring-billed Gull, 3; American Merganser, 120; Red-breasted Merganser, 770; Pintail, 4; Lesser Scaup Duck, 40; American Golden-eye, 9; Old Squaw, 2; Scoter, 4; Canada Goose, 40; Downy Woodpecker, 1; Prairie Horned Lark, 2; Blue Jay, 16; Crow, 26; Purple Finch, 32; Pine Grosbeak, 11; Redpoll, 1; Tree Sparrow, 31; Junco, 8; Song Sparrow, 2; Cardinal, 1; Brown Creeper, 4; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Golden-crowned Kinglet, 11; Robin, 4. Total, 26 species, 1,309 individuals.—FRANK C. GATES and N. L. PARTRIDGE.

Quincy, Adams Co., Ill.—Dec. 25; three hours in the forenoon. Cloudy; wind northwest; temp., 32°. Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 2; Red-bellied Woodpecker, 2; Prairie Horned Lark, 1; Blue Jay, 6; Crow, 1,500; Tree Sparrow, 50; Smith's Longspur, 1; Junco, 150; Song Sparrow, 2; Towhee, 1; Cardinal, 12; Brown Creeper, 7; White-breasted Nuthatch, 1; Tufted Titmouse, 18; Chickadee, 28; Golden-crowned Kinglet, 12. Total, 18 species, 1,797 individuals.—T. E. MUSSELMAN and V. G. MUSSELMAN.

Urbana, Ill.—Dec. 25; 7 to 11.30 A.M. Partly cloudy; ground bare; wind west, strong; temp., 25° to 30°. Sparrow Hawk, 1; Red-bellied Woodpecker, 1; Flicker, 2; Blue Jay, 2; Crow, 12; Tree Sparrow, 1; Brown Creeper, 1. Total, 7 species, 20 individuals.—FRANK SMITH.

Peoria, Ill.—Dec. 25; 10 A.M. to 12 M. Wind strong, northwest; cloudy; ground bare; temp., 28°. Herring Gull, 2; Hairy Woodpecker, 2; Downy Woodpecker, 2; Blue Jay, 5; Goldfinch, 2; Tree Sparrow, 75; Junco, 100; Cardinal, 12; White-breasted Nuthatch, 2; Chickadee, 11; Tufted Titmouse, 3. Total, 11 species, 216 individuals.—W. H. PACKARD and C. S. VAN DENSEN.

Milford, Ill.—Dec. 25; 10 A.M. to 1 P.M. Cloudy; ground bare; wind west, strong; temp., 30°. Bob-white, 12; Marsh Hawk, 1; Red-tailed Hawk, 2; Belted Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 11; Red-bellied Woodpecker, 5; Flicker, 7; Prairie Horned Lark, 3; Blue Jay, 53; Crow, 83; Purple Finch, 7; Goldfinch, 2; Tree Sparrow, 135; Slate-colored Junco, 30; Song Sparrow, 2; Cardinal, 17; Carolina Wren, 4; Winter Wren, 1; Brown Creeper, 8; White-breasted Nuthatch, 9; Tufted Titmouse, 31; Chickadee, 10; Golden-crowned Kinglet, 6; Robin, 1. Total, 25 species, 444 individuals.—H. C. HENDERSON.

Atwood, Ill.—Dec. 25; 8 A.M. to 12.30 P.M. Clear; ground bare; wind south, strong; temp., 30°. Rough-legged Hawk, 2; Red-shouldered Hawk, 1; Downy Woodpecker, 7; Red-bellied Woodpecker, 4; Blue Jay, 18; Crow, 50; Tree Sparrow, 28; Junco, 9; Song Sparrow, 1; Cardinal, 1; Brown Creeper, 2; Tufted Titmouse, 24; Black-capped Chickadee, 21. Total, 13 species, 168 individuals.—ALFRED O. GROSS.

Dixon, Ill.—Dec. 25; 10 A.M. to 1 P.M. Clear; ground bare; northwest wind; temp., 27°. Long-eared Owl, 1; Short-eared Owl, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 5; Crow, 28; Tree Sparrow, 4; Black-capped Chickadee, 2. Total, 9 species, 47 individuals.—J. E. ACKERT.

Wheatland, Will Co., Ill.—Dec. 26; 8.30 to 10.30 A.M. Cloudy; ground bare; wind southwest; temp., 20°. Through upland fields. Pinnated Grouse, 1; Marsh Hawk, 1; Screech Owl, 1; Downy Woodpecker, 1; Prairie Horned Lark, 3; Blue Jay, 3; Tree Sparrow, 28; Slate-colored Junco, 1. Total, 8 species, 39 individuals.—ELIZABETH and JESSIE ELDRIDGE.

Rantoul, Ill.—Dec. 25; 8 A.M. to 4 P.M. Cloudy; ground bare; wind west to northwest; temp., 30° to 33°. Bob-white, 17; Prairie Hen, 4; Mourning Dove, 1; Marsh Hawk, 2; Red-tailed Hawk, 3; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Northern Flicker, 3; Prairie Horned Lark, 67; Blue Jay, 19; Crow, 43; Tree Sparrow, 80; Slate-colored Junco, 100; Song Sparrow, 1; Cardinal, 11; Brown Creeper, 3; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 1; Tufted Titmouse, 4; Chickadee, 2. Total, 22 species, 375 individuals.—W. ELMER EKBLAW.

Salem, Ill.—Dec. 25; 8 A.M. to 12 M. Cloudy; strong, cold west wind; no snow; temp., 30°. Bob-white, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Red-bellied Woodpecker, 3; Flicker, 1; Blue Jay, 6; Crow, 2; Tree Sparrow, 6; Junco, 5; Cardinal, 8; Tufted Titmouse, 5; Chickadee, 2. Total, 13 species, 42 individuals.—FRANCIS A. and ROBERT B. COFFIN.

Rock Island, Ill.—Dec. 25; 9.30 to 11.30 A.M. Dull, cloudy; ground bare and frozen; strong, northwest wind; temp., 30°. Bob-white, 65; English Pheasant (lately introduced), 1; American Rough-legged Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 4; Crow, 2; Tree Sparrow, 3; Junco, 2; Cardinal, 2; White-breasted Nuthatch, 3; Chickadee, 13. Total, 11 species, 99 individuals.—BURTIS H. WILSON.

Moline, Ill., Riverside Cemetery and Arsenal Island.—Dec. 23; 10 A.M. to 1.30 P.M. Very cloudy; ground bare; wind southeast, light; temp., 31°. Bob-white, 50; Golden Pheasant (introduced on Government Island by Game Commission), 5; Rough-legged Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 6; Blue Jay, 3; Crow, 6; Goldfinch, 4; Pine Siskin, 2; Tree Sparrow, 60; Junco, 6; Cardinal, 3; Brown Creeper, 5; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 1; Tufted Titmouse, 2; Chickadee, 25. Total, 17 species, 186 individuals.—MRS. W. K. SLOAN.

Moline, Ill.—Dec. 22; 10 A.M. to 12 M.; 1 to 3 P.M. at Prospect Park, Riverside

Cemetery and Arsenal Island. Clear; ground bare; wind southwest, light; temp., 42°. Bob-white, 2; Golden Pheasant, 1; two were recently released on the island) Hairy Woodpecker, 4; Downy Woodpecker, 7; Red-headed Woodpecker, 6; Blue Jay, 14; Crow, 2; Crossbill, 12; Tree Sparrow, 3; Field Sparrow, 1; Junco, 45; Cardinal, 3; Brown Creeper, 2; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, 13; Golden-crowned Kinglet, 2. Total, 17 species, 120 individuals.—MRS. E. H. PUTNAM and GRACE PUTNAM.

Pelican Bar, Missouri River, 20 miles north of St. Louis, Mo.—Dec. 26; 7 A.M. to 5 P.M. Clear; ground bare; wind west, light; temp., 27° to 45°. Canada Goose, 1; Red-tailed Hawk, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 2; Flicker, 4; Crow, 100,000; Red-winged Blackbird, over 100,000; Goldfinch, 2; Tree Sparrow, 12; Junco, 30; Cardinal, 30; Myrtle Warbler, 36; Carolina Wren, 2; Tufted Titmouse, 4; Chickadee, 2; Robin, 1; Bluebird, 2. Total, 17 species, 118 individuals, without Crows or Blackbirds.—HARRY C. WILLIAMS and N. DE W. BETTS.

Kansas City, Mo. (Swope Park).—Dec. 25; 9.30 A.M. to 12.30 P.M. Clear; ground bare; wind northwest, thirty-six miles; temp., 38°. Sparrow Hawk, 1; Downy Woodpecker, 1; Red-bellied Woodpecker, 1; Blue Jay, 1; Crow, 11; Song Sparrow, 2; Tree Sparrow, 200; Junco, 70; Cardinal, 22; Brown Creeper, 1; Carolina Wren, 6; White-breasted Nuthatch, 5; Black-capped Chickadee, 14. Total, 13 species, 335 individuals.—H. R. WALMSLEY.

Kansas City, Mo. (South of City).—Dec. 25; 8.30 to 11.30 A.M. Clear; ground bare; high northwest wind; four miles; temp., 38°. Hairy Woodpecker, 5; Downy Woodpecker, 8; Red-bellied Woodpecker, 1; Blue Jay, 7; Crow, 11; Purple Finch, 44; Goldfinch, 2; Tree Sparrow, 125; Junco, 150; Cardinal, 56; Carolina Wren, 4; White-breasted Nuthatch, 10; Tufted Titmouse, 18; Chickadee, 40; Total, 14 species, 481 individuals.—JOHN E. CAMERON.

Concordia, Mo.—Dec. 25; 1 to 2.30 P.M. Clear; wind northwest, high; ground bare; temp., 31°. Blue Jay, 2; Goldfinch, 1; Junco, 100; Tree Sparrow, 46; Cardinal, 3; Tufted Titmouse, 3; White-breasted Nuthatch, 2; Chickadee, 3. Total, 8 species, 160 individuals.—FERDINAND SCHREIMANN.

Clay Center, Kans.—Dec. 31; 9 to 11.50 A.M.; 12.30 to 1.30 P.M. Cloudy; ground bare; wind east, light; temp., 20°. Red-tailed Hawk, 1; Rough-legged Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 1; Prairie Horned Lark, 5; Blue Jay, 1; Crow, 12; Tree Sparrow, 186; Junco, 13; Harris's Sparrow, 65; Cardinal, 4; Chickadee, 1. Total, 13 species, 293 individuals.—E. W. GRAVES and KALE DANINHAUER.

Lincoln, Neb.—Dec. 27; 3.30 to 5.25 P.M. Clear, except light cirrus clouds; ground bare; wind southwest, light. Downy Woodpecker, 2; Prairie Horned Lark, 40; Tree Sparrow, 3; Junco, 10; Chickadee, 2. Total, 5 species, 57 individuals.—MR. and MRS. E. W. GRAVES.

Omaha, Neb.—Dec. 26; 7 to 10.30 A.M. Clear and dry, no snow; slight southwest wind; temp., 30°, increasing to 45°. Bob-white, 9; Hairy Woodpecker, 1; Downy Woodpecker, 6; Yellow-shafted Flicker, 2; Blue Jay, 1; Crow, 52; Redpoll, 4; Goldfinch, 3; Pine Siskin, 7; Tree Sparrow, 7; Slate-colored Junco, 44; Cardinal, 2; Brown Creeper, 5; White-bellied Nuthatch, 5; Long-tailed Chickadee, 21; Golden-crowned Kinglet, 3. Total, 16 species, 172 individuals.—H. W. LIVERS and DR. S. R. TOWNE.

National, Iowa.—Dec. 29; 8.30 to 11.30 A.M. Clear; ground partly bare; wind southeast, light; temp., 36°. Downy Woodpecker, 1; Crow, 2; Blue Jay, 2; Redpoll, 35; Tree Sparrow, 2; Bohemian Waxwing, 6; White-breasted Nuthatch, 4; Chickadee, 9. Total, 8 species, 61 individuals.—ALTHEA R. SHERMAN.

Wall Lake, Iowa.—Dec. 26; 9.15 A.M. to 1.30 P.M.; 2.30 to 5 P.M. Generally clear; ground bare; wind northwest, brisk; temp., 32°. Prairie Hen, 1; Marsh Hawk, 1; Short-eared Owl, 3; Screech Owl, 1; Hairy Woodpecker, 1. Dec. 21, Downy Woodpecker, 1.

Dec. 24, Flicker, 1; Horned Lark, 20; Blue Jay, 3; Crow, 6; Bronzed Grackle, 3; Goldfinch, 16; Tree Sparrow, 16 (some singing); Chickadee, 4; Golden-crowned Kinglet, 1. Artificial groves cultivated, prairie and marsh land traversed. In order to make this list a reasonably complete list of birds to be found here now, I have included some seen on previous days.—JOHN A. SPURRELL.

Milwaukee, Wis.—Dec. 26; 9 A.M. to 2 P.M. Clear; ground mainly bare; snow in woods; wind southwest, light; temp., 20°. Herring Gull, 120; Scaup, 45; Golden-eye, 30; Downy Woodpecker, 2; Blue Jay, 1; Crow, 2; Tree Sparrow, 300; Junco, 200; Chickadee, 3. Total, 9 species, 603 individuals.—I. N. MITCHELL, F. W. ELLS, E. W. STICKNEY and W. H. CHEEVER.

Branch, Wis.—Dec. 25; Herring Gull, 100; Downy Woodpecker, 2; Blue Jay, 1; Snowflake, 75; Goldfinch, 12; Chickadee, 8. Total, 6 species, 198 individuals.—GEORGE H. EIGENBERGER.

Elkhorn, Wis.—Dec. 26; 8.45 A.M. to 12.30 P.M. Cloudy; wind southwest, high; snow in places; temp., 20°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 5; Crow, 22; Tree Sparrow, 1; Slate-colored Junco, 25; Brown Creeper, 1; White-breasted Nuthatch, 2. Total, 8 species, 59 individuals.—SARAH FRANCIS, MABEL BECKWITH and MEDORA HURLBUT.

Elkhorn, Wis.—Dec. 22; 2 to 4.30 P.M. Clear; snow patches on ground; no wind; temp., 50°. Hairy Woodpecker, 2; Downy Woodpecker, 2; Blue Jay, 10; Crow, 6; Evening Grosbeak, 2; Tree Sparrow, 5; Slate-colored Junco, 12; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2. Total, 9 species, 43 individuals.—SARAH FRANCIS, MABEL BECKWITH and MEDORA HURLBUT.

Baraboo, Wis.—Dec. 25; 9 A.M. to 12 M.; 3 to 5 P.M. Cloudy; northwest wind; temp., 24° to 30°. Bob-white, 12; Blue Jay, 6; Crow, 3; Junco, 14. Dec. 26; 3 to 5.30 P.M. Clear; wind northwest; temp., 32°. Bob-white, 1; Screech Owl, 1; White-breasted Nuthatch, 1; Chickadee, 1. Dec. 27; 9.30 to 11.30 A.M. Fair; temp., 30°. Downy Woodpecker, 1; Blue Jay, 6; Goldfinch, 5; Tree Sparrow, 12; White-breasted Nuthatch, 1; Chickadee, 6.—MRS. W. T. KELSEY.

Princeton, Wis.—Dec. 25; 8 A.M. to 4 P.M. Somewhat cloudy; nine inches of snow; wind south, light; temp., 39°. Bob-white, 45; Red-tailed Hawk, 1; Downy Woodpecker, 2; Blue Jay, 7; Crow, 3; Goldfinch, 6; Junco, 25; Brown Creeper, 2; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 3. Total, 10 species, 99 individuals.—JOHN N. LOSHINSKI

Sheboygan Falls, Weedens Station and Sheboygan, Wis.—Dec. 26; 10 A.M. to 5.45 P.M. Cloudy; ground covered with about eight inches of snow; wind south, strong; temp., 20° to 25°. Herring Gull, 6; Ring-billed Gull, 2; Old Squaw, 50; Lesser Scaup Duck, 6; American Merganser, 25; Red-breasted Merganser, 4; American Golden-eye, 10; Ruffed Grouse, 1; Downy Woodpecker, 6; Hairy Woodpecker, 2; Crow, 50; Blue Jay, 2; Pine Siskin, 12; Brown Creeper, 1; Red-breasted Nuthatch, 1; White-breasted Nuthatch, 3; Chickadee, 20. Total, 17 species, 201 individuals.—JAMES SANFORD.

Walworth, Wis.—Dec. 25; 9 A.M. to 1.30 P.M. Cloudy; ground nearly bare; wind west, strong; temp., 26°. Canada Goose, 42; Downy Woodpecker, 2; Red-headed Woodpecker, 2; Blue Jay, 12; Crow, 26; Redpoll, 8; Tree Sparrow, 30; Junco, 2; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 10. Total, 11 species, 137 individuals.—CARYL H. RIPLEY.

Westfield, Wis.—Dec. 22; 10 A.M. to 4 P.M. Clear; ground deeply snow-covered; wind very light, westerly; temp., 14° at 9.30 A.M. Quail, 50; Hairy Woodpecker, 3; Downy Woodpecker, 1; Red-headed Woodpecker, 4; Blue Jay, 15; Redpoll, 30; Goldfinch, 6; Tree Sparrow, 4; Junco, 12; White-breasted Nuthatch, 2; Chickadee, 18. Total, 11 species, 146 individuals.—PATIENCE NESBITT.

Minneapolis, Minn.—Dec. 21; 9 A.M. to 4 P.M. Fair; light, southwest wind; about

a foot of snow; temp., 10° to 23° . Bob-white, 10; Downy Woodpecker, 3; Blue Jay, 14; Snowflake, 5; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 5; Robin, 1. Total, 8 species, 43 individuals.—HARRIET BIRD CLUB.

Red Wing, Minn.—Dec. 25; 1.30 to 4.30 P.M. Clear; northwest wind; six inches of snow; temp., 26° . Barred Owl, 1; Redpoll, (a small flock); Goldfinch, 6; Tree Sparrow, 150; Brown Creeper, 4; White-breasted Nuthatch, 4; Chickadee, 3. Total, 7 species, 175 individuals (estimated).—NELS BORGES and FRITHJOF NACE.

Lake Minnetonka, Minn.—Dec. 26; 10 A.M. to 12 M.; 1 to 3 P.M. Partly cloudy; about eight inches of snow; fresh west wind; temp., 32° . Eleven mile trip, woods, fields and country roads. Downy Woodpecker, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 3. Total, 4 species, 6 individuals.—E. F. PABODY, JR.

Spink, Union Co., S. Dakota.—Dec. 24; 10.30 A.M. to 1 P.M. Clear; one inch of snow on ground; wind northwest; temp., 24° . Mallard, 1; Quail, 10; Mourning Dove, 3; Barred, or Cat Owl, 3; Downy Woodpecker, 3; Crow, 11; Goldfinch, 50; Tree Sparrow, about 200; Chickadee, 23. Total, 9 species, about 304 individuals.—ANDREW and THOMAS SOLEM.

Sioux Falls, S. D.—Dec. 25; 11 A.M. to 5.30 P.M. Clear, ground mostly snow-covered; wind northwest, medium; temp., 23° . Bob-white, (fresh tracks); Prairie Chicken, 1; Downy Woodpecker, 1; Crow, 4; Redpoll, 100; Lapland Longspur, 1; Tree Sparrow, 7; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 3; Total, 11 species, 120 individuals.—ADRIAN LARSON.

Minnedosa, Manitoba.—Dec. 25; 10 A.M. to 12 M.; 3 to 5 P.M. Snowy in morning for a while, then bright and sunny; wind light, south; eight inches snow on ground, except on wind-swept fields; temp., 14° to 20° . Sharp-tailed Grouse, 25; Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 3; Pine Grosbeak, 8; Redpoll, 16; Snowflake, 2; White-breasted Nuthatch, 1; Chickadee, 10. Total, 10 species, 60 individuals. Six Ruffed Grouse were seen on Dec. 25; one Saw-whet Owl, Dec. 18; three American Ravens, Dec. 13; one Northern Shrike, Dec. 20; one Snowy Owl, Dec. 24.—JOHN WOODCOCK.

Bozeman Creek Canyon, Gallatin National Forest, Mont.—Dec. 21; 9 A.M. to 4 P.M. Partly cloudy; ground snow-covered, two to fifteen inches; wind west, medium; temp., 15° ; elevation 4,800 to 6,500 feet. Canadian Ruffed Grouse, 1; Alpine Three-toed Woodpecker, 1; Desert Horned Lark, 4; Magpie, 12; Clark's Nutcracker, 2; Alaskan Pine Grosbeak, 32; Redpoll 65; Western Tree Sparrow, 2; Mountain Song Sparrow, 1; American Dipper, 4; Long-tailed Chickadee, 2; Mountain Chickadee, 18. Total, 12 species, 144 individuals.—ARETAS A. SAUNDERS.

Bozeman, Mont.—9.30 A.M. to 1.15 P.M. Clear; ground covered with one inch of snow; wind southwest, light; temp., 34° . Elevation, 4,800 feet. Magpie, 120; Crow, 7; Redpoll, 15; Western Tree Sparrow, 27; Mountain Song Sparrow, 2; Bohemian Waxwing, 21; Northern Shrike, 2; Long-tailed Chickadee, 14. Total, 8 species, 208 individuals. A Short-eared Owl was brought to me, which was shot in this vicinity on the evening of December 23.—ARETAS A. SAUNDERS.

Rathdrum, Idaho.—Dec. 25; 9.45 A.M. Cloudy; wind south, brisk; temp., 40° at start, 42° at return. White-winged Crossbill, 8; Song Sparrow, 2; Red-breasted Nuthatch, 9; Chickadee, 1. Total, 4 species, 20 individuals.—PERCY L. JUDD.

Naramata, B. C.—Dec. 21; 1 to 4.30 P.M. Very cloudy; cold, south wind; six to ten miles; ground bare; temp., 25° . Gull (unknown), 1; American Golden-eye, 4; Bufflehead, 2; American Coot (estimated), 300; Downy Woodpecker, 3; Red-shafted Flicker(?), 1; Steller's Jay, 1; Clarke's Nutcracker, 9; Magpie, 6; Water Ouzel, 1; Rocky Mountain Creeper, 2; Red-breasted Nuthatch, 40; Chickadee, 80. Total, 14 species, 450 individuals.—JNO. M. SCHRECK.

Olympia, Wash.—Dec. 29; 9.30 A.M. to 12.30 P.M. Cloudy; no wind; temp., 35° .

Red-shafted Flicker, 8; Steller's Jay, 1; Crow, 14; Western Meadowlark, 2; Western Evening Grosbeak, 5; Purple Finch, 2; Junco, 32; Rusty Song Sparrow, 19; Oregon Towhee, 8; Western Winter Wren, 5; Oregon Chickadee, 6; Chestnut-backed Chickadee, 13; Mountain Chickadee, 4; Golden-crowned Kinglet, 13; Ruby-crowned Kinglet, 7; Western Robin, 2; Varied Thrush, 26. Total, 17 species, 167 individuals.—MRS. MAY R. THAYER.

Prescott, Wash.—Dec. 25; 10 A.M. to 12 M.; 2.30 to 3 P.M. Cloudy; ground with one inch of snow; wind light, southwest; temp., 34°. Mallard, 5; Green-winged Teal, 5; Great Blue Heron, 1; Killdeer, 1; Bob-white, 20; Mourning Dove, 5; American Goshawk, 1; Rocky Mountain Hairy Woodpecker, 2; Red-shafted Flicker, 6; American Magpie, 15; Western Meadowlark, 5; Western Goldfinch, 60; Oregon Junco, 115; Merrill Song Sparrow, 31; Bohemian Waxwing, 150; Rocky Mountain Creeper, 4; Oregon Chickadee, 11. Total, 17 species, 437 individuals.—LEE R. DICE.

Seattle, Wash.—Dec. 20 9 A.M. to 3 P.M. Clear; ground bare; wind southeast, light; temp., 35°. Northwest Flicker, 1; Gray Jay, 1; Sooty Song Sparrow, 1; Oregon Junco, 8; Oregon Towhee, 2; Golden-crowned Kinglet, 1; 'Seattle' Wren, 1; Varied Thrush, 3; Western Robin, 24. Total, 10 species, 53 individuals. Visitors to my garden and bird's table.—MRS. L. H. GRAY.

San Rafael, Cal.—Dec. 25; 2 to 4.30 P.M. Partly cloudy; light, south wind; temp., 43°. Valley Quail, 10; Western Red-tailed Hawk, 8; California Woodpecker, 1; Red-shafted Flicker; California Jay, 6; Oregon Jay, 2; Bullock's Oriole, 2; Western Meadowlark, 3; Brewer's Blackbird, 20; Willow Goldfinch, 20; Bryant's Marsh Sparrow, 6; White-crowned Sparrow, 15; Oregon Junco, 20; Spurred Towhee; Pacific Yellowthroat, 1; Plain Titmouse, 3; Ruby-crowned Kinglet, 10; Western Golden-crowned Kinglet, 1; Western Robin, 30; Hermit Thrush, 8; Western Bluebird. Total, 21 species, 174 individuals.—EMMA BEEBE.

LaCanada, Los Angeles Co., Cal.—Dec. 24; 8 to 9 A.M.; Dec. 25; 10 to 12 A.M. 2 to 4 P.M. Clear; wind light; temp., 62° to 81°. Valley Quail, 1; Mourning Dove, 2; Pigeon Hawk, 3; Red-breasted Sapsucker, 2; Red-shafted Flicker, 20; Anna's Hummingbird, 4; Rufous Hummingbird, 1; Black Phoebe, 1; Western Meadowlark, 23; Brewer's Blackbird, 50; House Finch, 154; Arkansas Goldfinch, large flocks; Gambel's Sparrow, large flocks; Golden-crowned Sparrow, large flocks; Thurber's Junco, large flocks; California Towhee, 261; White-rumped Shrike, 3; Audubon Warbler, large flocks; Western Mockingbird, 50; Pasadena Thrasher, 4; Vigor's Wren, 2; Western Winter Wren, 1; Ruby-crowned Kinglet, 10; Western Gnatcatcher, 14; Russet-backed Thrush, 1; Western Robin, 100; Western Bluebird, 15. Total, 27 species, 722 individuals.—MINNIE K. ANDERSON, HENRIETTA HORNE, LOUISE WASHINGTON, CLARA ARMSTRONG and MARION LEE.

San Diego, Cal.—Dec. 25; 8 to 10.30 A.M.; 4.30 to 5.30 P.M. Forenoon fair, showers from 1 to 4 P.M.; wind north, light; temp., 60° to 75°. Valley Partridge, 350; Western Red-tailed Hawk, 1; Red-shafted Flicker, 8; Anna's Hummingbird, 7; Cassin's Kingbird, 3; Say's Phoebe, 2; Horned Lark, 3; California Jay, 2; Red-wing Blackbird, 10; Western Meadowlark, 115; Brewer's Blackbird, 65; California Purple Finch, 60; Arkansas Goldfinch, 36; Lawrence's Goldfinch, 2; Western Grasshopper Sparrow, 1; Intermediate White-crowned Sparrow, 1,000; Bell's Sparrow, 2; Rufus-crowned Sparrow, 5; California Towhee, 35; California Shrike, 2; Audubon's Warbler, 150; Townsend Warbler, 1; Sage Thrasher, 1; Mockingbird, 6; California Thrasher, 8; Parkman's Wren, 6; Dwarf Hermit Thrush, 5; Bluebird, 32. Total, 28 species, 1,918 individuals. Species last year 27, individuals 790 in same territory. Number species seen this year and not last, 9. Species seen last year and not this, 8. Observations in 1400 acre City Park, San Diego, Cal.—H. D. MEISTER.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

FOR the ornithologist the beginning of the new year is in reality marked by the arrival of the first bird from the South. What an eloquent message of new life it brings! Autumn passes imperceptibly into winter; winter birds come before autumn birds go, and the species of the two seasons join and separate as gradually as do the seasons themselves. How much less significance is attached to the appearance of Junco or Creeper in September than to the arrival of the Robin or Grackle in March! Yet the one as surely indicates the death of the old year as does the other the birth of the new.

Envy as we may the dweller south of temperate climes, where the rigors of winter and the comparative scantiness of its feathered kind are unknown, he misses much who has not suffered the famine of winter to prepare him for the feast of spring. For him no Robin chants its lay of hope and good cheer; no swelling Blackbird chorus oozes from the earth, like the very essence of perpetual youth.

WITH the coming of the birds, the complexities of the ever-present problem of their identification with field- or opera-glass increases; and it is presented to the editor of the natural history magazine in a far more complicated form than to the student. Let us state the difficulties of our position and seek the forbearance of our contributors. The news of the presence of a bird beyond the normal limits of its range becomes, when published, what is termed a 'record of occur-

rence.' Such a record becomes a part of the history of that species, always to be included in its biography or in any comprehensive statement of its range.

A number of species owe their place in our 'Check-List' of North American birds on just such a record of occurrence; while birds of the Pacific coast have found a place in the list of east coast birds, or vice versa, on a single record of this kind. Such a record, then, becomes a contribution, to our knowledge of the distribution, even if exceptional, of that species, in other words, a contribution to the science of ornithology. Now as an acceptable contribution to science it must have a scientific foundation. There must be no question as to the identity of the bird in question; the evidence on which the record is based must be of such a nature that it can be submitted to others when occasion requires. Such occasion may arise during the lifetime of the recorder, or not until after his death; but it can be met satisfactorily only by the production of the specimen on which the record was based.

The literature of ornithology is filled with fruitless discussions of the local status of some species whose presence here or there has been recorded on insufficient evidence. To our mind nothing is to be gained by the publication of records of this kind. As the circumstances surrounding them become with time more and more difficult to verify, so the records themselves become increasingly open to question.

The field-glass student should not be discouraged by this view of the case, but should frankly accept the limitations of his methods of study. There are two kinds of ornithological research; one is based on the study of specimens; the other on the study of the living bird. The first requires the use of the gun; the second, of the glass; but in North America, at least, there is far more to be learned with the latter than with the former. It is of much greater importance to add a new fact to the biography of a species than an accidental record of occurrence to its range.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by MABEL OSGOOD WRIGHT

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How Our Birds Spend the Winter

IN the bird world there is supposed to be no class distinction, no rich, no poor; all are equipped alike for the battle of life by instinct. Yet those of us who have followed the lives of even a score of the most familiar birds throughout the year must confess that they are made either hard or pleasant by circumstances of birth very much like our own.

From our viewpoint in the middle and New England states, birds classify themselves roughly in two groups,—the summer, and the permanent residents. Pick half a dozen birds from each of these groups, consider their comings and goings. You will presently see that neither among birds nor among men are all born free and equal, and that the traveler on the wing is as much linked to law and the potency of heredity as the wearer of shoes.

The birds that we know as summer residents, such as the Baltimore Oriole, Scarlet Tanager, Bobolink, Barn Swallow, Wood Thrush and Rose-breasted Grosbeak, really enjoy two summers, the same as they wear two changes of clothing during the year.

When the spring impulse, let loose by melting snow, steals over the northern hemisphere, it finds the birds that come to us for their home-making within our borders, because it is the homestead of their tribe, already on the wing. There are perils by land and sea in this journey, long flights and fastings and buffetings; but when at last they arrive it is usually to find good marketing and a roof-tree waiting.

Of course, there are sometimes ill-timed journeys, when winter has given a false alarm of retreat and, coming back, locks up the larder, and the tired wayfarers perish by the way,—but this is the exception, not the rule. Arriving in their summer haunts, these birds have a period of ecstatic song and courtship before settling down to the real labors of raising one, two, or sometimes, as with the House Wrens, three broods.

After the breeding season comes a period of enforced rest, called the molting time. While the nest-worn feathers are being changed, the birds at this season are enervated and lacking the strength for long flight they mope and gossip (yes, I've heard them, of this I'm positive) in well-leaved shade, all the while eating well of the plenty of late summer; for August, the lazy month, is the time that Nature has set apart for the feather-changing process.

Then follows two months or more of the social and community life, with the excitement of flocking and the southward journey; and, when winter comes to us, these summer birds are entering upon a second and tropical summer—a vacation season without care or responsibility, from which they will finally emerge refreshed and provided with new spring garments for the return flight.

But what of the other birds, winter residents with us or wandering visitors alike? Their summer cares are the same as those that fly before the frost that they must face, compelled by a force outside of the region of their own will.

Take, for example, the Tree Sparrow, Downy Woodpecker, American Goldfinch, the slender-billed Brown Creeper, the dainty Redpoll, and a score of others, including the Ruffed Grouse and cheerful Bob-white. What is their vacation season, and how is it spent? In what, if a similar condition existed among human beings, would be considered a time of pinching economy akin to famine, and the enduring of which not only patiently but cheerfully by men would be called heroism. But as birds do not push trembling hands in our faces and clamor for charity, we forget their needs, and they too often disappear, deprived of natural food and shelter by the very march of the civilization of which we are proud.

If they cannot speak for themselves, their friends should never cease to do it for them in the same old words, winter after winter. "Do not clear away the wild hedges—leave some shocks of corn in your field, scatter grain sweepings in likely places, fasten suet to your orchard tree, and spread a lunch-counter under your window out of the reach of *cats*! Do not use that irresponsible argument, "There are never any birds in winter where I live;" for if there are none the responsibility is yours for not aiding them to be there. For we are all keepers of our brother, in one sense or another, and the larger brotherhood includes all forms of sensate life. When we deliberately shirk responsibility we have ceased to live in the best sense.

Remember, my friend, in February lies the stress of winter. It is not too late, begin now, feed the hungry birds, and as you do it study the mystery of their winter lives; for, as the bird song, of all music, sinks the deepest into the heart of memory, even as the bird's air-cleaving wing bears it the farthest through that which to us is the unfathomable.—M. O. W.



THE MALLARD

By EDWARD HOWE FORBUSH

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 36

(Issued also as Special Leaflet No. 19)

The Mallard is the wild duck *par excellence*. It is the progenitor of many varieties of domesticated ducks, and probably exceeds in numbers of individuals any other species of duck, besides being one of the largest and handsomest of the duck family. It is one of the best of all ducks on the table, and considering its numbers and quality it is regarded as of greater economic value than any other of the wild ducks.

Its Range In North America the Mallard breeds normally over the northern half of the United States, west of Pennsylvania, including Alaska, and in all the British Provinces west of the longitude of Hudson Bay; also in Greenland. East of Hudson Bay and throughout New England and the Middle Atlantic States its place is taken largely by the Black Duck. It breeds very rarely, if at all, in this region; but its breeding range in the far West extends south to New Mexico and lower California.

The Mallard remains in the North until the ponds and rivers freeze, when it begins its southward journey. It migrates mainly north and south. The vast majority of the Mallards spend the winter in the Gulf States, in northern Mexico and along the Pacific coast. But some go southeast in autumn, reaching southern New England and the Atlantic seaboard.

Its Nest and Eggs The Mallard requires special protection, for it is not usually so prolific nor so sagacious in keeping out of danger as is its eastern prototype, the Black Duck. Its nest is usually placed on the ground near a marsh or in a tussock of grass, and more rarely among the bushes on some near-by hillside. It is composed mainly of coarse grasses and weeds and often lined with down from the mother's breast. The large, smooth eggs are dirty greenish white, bluish white, pale cream, buff, yellowish drab, "or some similar dingy color," and vary ordinarily from six to ten in number (Hatch states that in Minnesota the Mallard deposits from ten to twelve eggs). The young when hatched soon take to the water where they are watched over and defended by the female.

Its Food and Economic Value Like all fresh-water ducks the Mallard is largely a vegetarian, but it prefers soft, succulent vegetable matter when such is to be found, and probably cannot thrive without a considerable ration of animal food as well, of which all our wild ducks are fond. This bird becomes of considerable economic value to the farmer at times because of the nature of its food. It sometimes attacks sprouting or ripened grain, but like most fresh-water fowl it is undoubtedly of service in destroying such insects as the locusts and army



MALLARD

Order—ANSERES
Genus—ANAS

Family—ANATIDÆ
Species—BOSCHAS

worms which sometimes become serious pests. Professor Aughey found in the stomachs of ten Mallards, taken in Nebraska, 244 locusts and 260 other insects, besides mollusks and other aquatic food. Examination of 126 stomachs of the Mallard made at the Biological Survey revealed 17 per cent animal-matter food and 83 per cent vegetable. The most important items of the animal food found were dragon-fly nymphs, fly larvæ, grasshoppers, aquatic beetles, and hemiptera. Bivalve and univalve mollusks are consumed in numbers, and earth-worms and crustaceans also are devoured. The principal elements of the vegetable food are seeds of smartweeds (*Polygonum*), seeds and tubers of pondweed (*Polamogeton*) and of sedges. Other items of importance are the seeds of wild rice (*Zizania*) and other grasses, of burhead (*Sparganium*), hornwort (*Ceratophyllum*), water lily (*Brasenia*), and widgeon grass (*Ruppia*). A great many vegetable substances of less importance are included in the Mallard's diet, of which the following are worthy of note: Wild celery, algæ, roots of arrowhead (*Sagittaria*), fruits, such as grapes, dogwood, sour gum, and bayberries, and the seeds of such small aquatic plants as millweed (*Myriophyllum*), horned pondweed (*Zannichellia*) and mermaid-weed (*Proserpinaca*).

Mallards and other wild ducks are of much service to the rice planters of the south, for they feed largely on the crayfish, which injure the dikes and levees, and on the volunteer or red rice which they glean in the fields after the harvest, and which if left to grow produces the red rice so deleterious to the crop. The Mallard is of great value to the country as a means of food supply alone. Undoubtedly the annual sum received for Mallards in the markets of the United States would run into very large figures.

Its Former Abundance The Mallard was found in such numbers during the early settlement of the West that a skilled gunner equipped with modern weapons might have killed hundreds in a day. It bred with other wild ducks about all the prairie sloughs of the north, and its eggs and flesh formed a considerable part of the food of Indians, half-breeds and settlers. It was abundant as a breeding bird in the early days through a large part of the Middle West and in all the Western Canadian Provinces.

Within the past forty years there has been a tremendous decrease in the annual flight of Mallards and other fresh-water ducks that winter in the south.

Its Decrease Reports from various localities indicate that the numbers of birds have decreased from 50 to 90 per cent; but large flights of wild fowl from the vast regions of the north still crowd into the unfrozen waters of the Gulf and South Atlantic States in winter. Therefore, the decrease there is not so noticeable as it is on the breeding range in the north. Mr. Henry Oldys, of the Bureau of Biological Survey, says that wild fowl are now becoming so scarce along the west coast of Hudson Bay where there are no moose, caribou are few and the fishing is poor, that the few people living there who have always depended largely on the birds they could pack away in the fall find it difficult to get food enough to carry them through the winter.

When the Mallard begins to decrease preceptibly on the northern breeding grounds it is time to inquire the cause of such depletion.

Causes of Depletion Prof. W. W. Cooke of the Biological Survey gives as the principal causes of the diminished numbers of water-fowl, market hunting, spring shooting, and the destruction of the breeding grounds for farming purposes. The great prairies of the West and Northwest, where the Mallard formerly bred in immense numbers, have been settled and put under the plow. Marshes and sloughs have been drained and used as pastures. This agricultural occupation and improvement of the land, which has broken up the breeding grounds from Arkansas to Athabaska, has been accompanied by unlimited destruction of the birds for food and other purposes. Thus hunting, particularly the spring shooting, has driven the birds out of the United States and away from settled lands to the far north, greatly reducing their breeding area and their opportunities for reproduction. Looked at from the standpoint of the present day, the waste of bird life in the last century was appalling. Hundreds of tons of ducks were killed in the South and West for their feathers by negroes, Indians, half-breeds and whites and the bodies thrown away.

Unrestricted market hunting was carried on also for many years and is still continued in some regions. Prof. W. W. Cooke, of the Biological Survey, avers that even as late as the winter of 1893-94 a single gunner at Big Lake, Arkansas, sold 8,000 Mallards, and 120,000 were sent to market during that season, from that place alone. Sportsmen deceived by the apparently inexhaustible numbers of wild fowl destroyed great numbers.

Mr. W. L. Finley who has recently (1908) explored Malheur Lake, Oregon, says that formerly, when the wild fowl were very numerous there, a party of hunters could easily secure a wagon-load in a short time. On their return to town the wagon was generally stopped on the corner of some street and passers-by were allowed to help themselves as long as the supply lasted. One sportsman in Minnesota boasted of having killed upward of 1,000 Mallards in a single fall.

Notwithstanding the decrease of the birds, modern guns and methods now render the gunner more destructive than ever before. In 1900 I visited a gunning preserve in Florida where northern sportsmen were shooting ducks by the hundred and giving them away to their friends and to settlers.

One of these gentlemen armed with repeating guns and supplied with a man to load and others to drive the birds to his decoys is said to have killed on a wager over one hundred ducks in less than two hours. Even within the last two years reports of reliable observers on the Gulf coast aver that market hunters there have been killing 100 birds each per day.

The Houston (Texas) Post of January 29, 1908, asserted that during the previous week five citizens while hunting came upon a small lake into which the fowl were flocking in great numbers. Using their repeating guns and acting by a praeranged signal they flushed the game, emptied their guns and gathered 107 killed, not counting the wounded and missing. The birds were mainly Mallards.

These recent instances will serve to show the danger that now menaces American wild fowl by reason of the vast and increasing number of hunters and the improvements in ammunition and firearms.

If spring shooting, market hunting, cold storage and the breaking up of the breeding grounds have so greatly decreased the numbers of ducks in the last forty years what will be the result at the end of the next half century if with our improved firearms and means of transportation the past policy is continued? In that case certainly, in fifty years more there will be practically no wild ducks left in North America. The settlement of the land and the extension of agricultural enterprises—including the



WILD DUCKS AS PETS
Photographed on Lake Worth, Fla.

draining of marshes and sloughs—*will go on*; it cannot be stopped. Experience shows that the number of hunters will continue to increase with the increase of population. How then can the extermination of the birds be checked? Market hunting can be stopped by prohibiting the sale of the birds. Let duck shooting be limited by law to the fall months, and the month of December. Every reason that can be given for prohibiting the killing of upland game-birds after January 1 will apply to wild fowl as well. With such laws well enforced, and with spring shooting stopped, the birds will come back to breed in every favorable spot, as they have done in states where spring shooting and sale are now prohibited. Even a single limited locality soon feels the benefit of the prohibition of shooting. At Titusville, Florida, where no shooting is allowed near the hotel and wharves the wild ducks from the river become so tame that they swim

about among the boats like domesticated fowl, and will even come out on the lawn near the hotel. These same ducks when out on the river beyond the "dead line" are as wild as the wildest. At Lake Worth, Florida, the same conditions prevail, and the Scaup ducks swimming in the lake become so confiding that they may be fed from the hand. In the ponds of the Middlesex Fells Reservation near Boston, Mass., where gunning is prohibited, the Black Ducks have greatly increased and some now nest in the vicinity of Boston. When the state of New York first prohibited spring shooting, breeding Black Ducks were rare on Fisher's Island. A few years later there was good shooting on the island each fall because of the ducks that were reared there. Dr. Shaw, who was rearing wild ducks near New Bedford, Mass., asked the farmers near his place to post their land and prevent shooting as a means of protecting his ducks from poachers. This was done, and within two years wild black ducks began breeding on the farms all about.

When spring shooting is prohibited by law in any state, and this provision enforced, ducks that were formerly driven to Canada to breed soon begin to come back and occupy their old breeding grounds. This has occurred in New York, Connecticut, Minnesota and other states. If all the states will enact laws prohibiting late winter and spring shooting the wild fowl now driven out from their greater breeding grounds by the occupation of the land will find smaller nesting places scattered all over the northern part of the country and the perpetuation of all species will be assured.

Wild Ducks in Relation to Rice Culture

It is now proposed by certain people in Texas to remove the legal restrictions to the killing of wild fowl that the extermination of the birds may proceed unhampered. The reason given is that the wild ducks are destroying the rice crops. Let us consider this proposition from the standpoint of dollars and cents. To begin with, as the matter now stands and under the present statutory restrictions, there is no doubt that the wild fowl now killed in the great state of Texas represent a food product worth a very large sum to her people annually. If any one doubts this let him scan the statements so often published in the press of Texas regarding the numbers of ducks killed in one day by single individuals or by parties of gunners. It is a well-known fact that, at points along the southern coast, certain market hunters have been killing, on an average, one hundred ducks per day each. It is impossible to get exact figures regarding the numbers of ducks and geese killed in any state, but we now have a means of closely approximating the number of hunters. In those states that have hunting license laws for residents we find that, on the average, 3 per cent of the population take out hunting licenses. This does not include the entire hunting population as the farmer hunting on his own land is exempted. By the census of 1900 the population of Texas is given at 1,578,900. Assuming that only 3 per cent of these are hunters we have 43,367

hunters in the state in the year 1900 and there has been a large increase in population since that year. If these hunters should each kill but ten ducks or geese in a year, 473,670 ducks and geese would be killed annually, and when we consider that there are hunters who kill thousands of birds each in a year the value of this natural resource—this food supply—to the state can hardly be estimated.

Do the farmers of Texas purpose to exterminate birds that are bringing in such an annual revenue to the state, merely because the birds have eaten a few thousand dollars worth of rice left neglected in shocks in the fields? Let the birds be once exterminated and the farmers will begin breeding domesticated ducks for food. Will they kill those ducks because they are obliged to feed them grain? Moreover it is evident, when the situation is understood, that the damage to crops is only partially due to birds. The Texas Press of January, 1908, contains many references to the injury done by wild fowl to the crop in the rice-belt and there seems to be a disposition now to attribute to the birds all the loss sustained by the planters. It seems to have been forgotten that the main injury to the rice crop of 1907 was not due to birds but to the heavy rains which, early in the season, beat upon the unstacked rice left in the flooded fields, prevented early harvesting and destroyed a great part of the crop. In "Rice Industry" for November 1, 1907, we find it stated editorially that the continued spell of rainy and damp weather which had at that time lasted almost continually since about the middle of September materially interfered with the harvesting of the rice crop over a large section. Again on another page in the same issue, it is stated that the principal damage is done to rice in shocks lying in the fields, and that the warm moist weather had caused much of this to sprout. In the December (1907) number of the same journal the Secretary of the Texas Rice Farmers' Association says "weather conditions are such that 50 per cent of the rice yet to thresh will be almost a total loss," and that all of it is in such bad condition that it will not keep in sacks.

On another page a letter from New Orleans dated November 22, states that, owing to heavy rains throughout the rice-belt, rice in shocks is in a deplorable condition, rotten and floating. Similar returns coming from a large part of the rice-belt prove conclusively that the ducks were not the primary cause of injury. No doubt great numbers of ducks were attracted to the rice fields near the coast by the unusual quantity of damaged rice remaining in the fields—some of it already abandoned—and undoubtedly they helped to complete the ruin of this part of the crop; but under ordinary conditions, when the rice is early harvested and properly cared for, the ducks will do very little injury to the crop, and under such conditions they may be counted among the best friends of the rice-planter.

WILD DUCKS THE FRIENDS OF THE FARMER

In ordinary seasons any farmer who has not sown more rice than he can take care of can get it harvested and properly stacked in good weather early in the season. It is then practically safe from rain and birds. Rice, even if left in shocks

in the fields, is fairly safe from the ducks until the Mallards and Sprig-tails begin to come in numbers in November and December.

When the rice farmers shall have secured better drainage for their fields, their crops will be larger and the fields will be in much better condition for harvesting during a wet season. Prominent growers are advocating stacking rice as a means of protection. Mr. S. Locke Breaux writes to "Rice Industry" on December 20, 1907, "When you have the conditions of weather that have existed . . . a man will have to stack his stuff, and, if it is properly stacked the weather is not going to hurt it much and certainly the birds and hogs won't hurt it at all."



A WILD DUCK PRESERVE

Messrs. Frank Bond and George H. Keeney, irrigation experts, state in Bulletin No. 113 of the United States Department of Agriculture that observant rice-growers who have watched the wild fowl and measured the extent of their depredations state that good rice farming and intelligent handling of the crops after reaping will place the birds wholly on the beneficial list.

Wild ducks are the most useful of all birds to the rice farmers because they are the most industrious gleaners of the volunteer red rice which otherwise seeds down the fields to the great injury of the coming rice crop. Rice that scatters from the heads during harvesting is believed by many persons to produce red rice, but the Louisiana station has proved that the red rice is a distinct variety. There is usually more or less of this red rice in the field, the grain shatters out readily and where there are not birds enough to clean it up, large quantities spring up and grow. Where this is the case, this worthless grain may take such

a hold on the ground as to require the burning of whole fields to eradicate it. In any case the amount of red rice that is found mixed with the rest after threshing has a great deal to do with the price received, hence the services of the ducks are worth many thousands of dollars annually to the rice farmers.

Wild ducks, particularly Mallards, are also useful to the planter by destroying crayfish and the young of snakes, both of which, particularly the crayfish, burrow in and thus injure the levees making continual repairs necessary.

Mr. Brewster, of the Bureau of the Biological Survey, United States Department of Agriculture writes that in ordinary years the rice crop is harvested and out of the way before the water-fowl arrive there in the fall. Occasionally a backward season delays harvesting and allows the wild fowl to arrive before it is complete; but the good they do in other years by destroying the red rice far more than compensates for the harm done in the exceptional years.

He states that men who have been engaged in market hunting near High Island, Texas, for fifteen years assure him that the number of ducks of all varieties, except perhaps the teal, have decreased fully 50 per cent. Where ducks have decreased so markedly in numbers in such a brief period the present laws particularly the bag limit should be kept on the statute books and the law should be rigidly enforced.

The game laws of Texas do not yet give wild fowl adequate protection. Spring shooting, now forbidden by law in many states is not prohibited here. The annulment of the present bag limit and the restrictions on the sale of game would result in the ultimate destruction of this bounteous annual food supply—this natural asset of the great state of Texas.



CRAYFISH. INJURES DIKES AND LEVEES.
Eaten freely by Wild Ducks

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 141 Broadway, New York City

National Conservation Commission

One of the most important meetings ever held in this country was the one called by President Roosevelt last spring, when he invited the governors of the several states to meet in Washington to consider the best methods of conserving the natural resources of the country.

The outgrowth of the meeting was the formation of the National Conservation Commission, under the leadership of Mr. Gifford Pinchot, Chief Forester of the United States.

Recently Mr. Pinchot asked the National Association to appoint a committee of five of its members to take charge of wild bird and animal protection in the United States as a sub-committee to co-operate with the Commission.

The Committee is as follows: Edward Howe Forbush, Chairman; Dr. Theodore S. Palmer, Frank Chapman, William Dutcher, T. Gilbert Pearson, Secretary.

The first work proposed by the sub-committee will be to prepare a report blank to send broadcast throughout the United States, in order to get an approximate census of the birds of the country, especially game birds, and a second line of investigation will be to discover the number of game birds and animals killed each year by sportsmen.

When the Committee is prepared to make a preliminary report on these two subjects, the matter of bird and game protection can be placed upon a much more scientific basis than the present knowledge of the subject permits.

The Committee will welcome the aid of every member of the Association, as well as every reader of BIRD-LORE, all the sportsmen of the United States, and

all others interested in wild birds and animals.

State Audubon Reports

SOUTH CAROLINA.—The Audubon Society, of South Carolina, was chartered by the General Assembly, 1907. Organized with election of the following officers: B. F. Taylor, Columbia, S. C., president; James Henry Rice, Jr., Spartanburg, secretary, and a full board of directors. The treasurer, A. R. Heyward, Jr., Columbia, was appointed by the governor.

Work began on April 23, when the secretary went on the road to secure members and to work up interest among the people. The year 1907 closed with fairly satisfactory results, but no action was taken on the society's bills, introduced into the General Assembly which convened in January.

The society had no means of raising revenue except from membership fees, save a small amount, about two thousand dollars, that was realized from a non-resident license.

During the year, however, the work has been pushed with vigor and determination, the secretary having spent the entire year in the field. One hundred and six wardens are now working, most of them doing satisfactory work.

The secretary has delivered lectures in every quarter of the state, and has aroused acute interest in the subject of bird and game protection. He is also an active warden, and has made many arrests and secured a number of convictions.

At the same time President Taylor, who is a business man, with headquarters at Columbia, devoted a great deal of his time to spreading the propaganda of bird

protection. He prepared and had published the laws of the state, and has furnished many articles to the press on the subject of birds, game and fish; for the General Assembly has added to the usual burden by giving control of non-migratory fish to the Audubon Society.

From the beginning of the year, the secretary has kept up a series of articles in the daily and weekly newspapers of the state, treating at length almost every phase of the question, and educating the people to a higher knowledge of the value of bird life. This campaign is still being kept up.

The society has now a regular membership of 500, and is growing fast.

GENERAL CONDITION

When the Audubon Society took charge, there had never been any concerted attempt to enforce the game and fish laws, although two years before (1905) the American Ornithologists Union law had been adopted.

Up to a few years ago the state was composed of large plantations, and this is still the rule over much of its area. The state has an area of some 30,000 square miles, or a little less than 20,000,000 acres. Of this, probably not exceeding 5,000,000 acres are under cultivation, the rest being wild land, several million acres being river swamp.

From early days South Carolina has had a variety and an abundance of birds, game and fish, natural fastness preventing their extermination. Within recent years, with the introduction of rapid-fire guns, and the propensity of the negro to slaughter anything with fur or feathers on it, vast inroads have been made on the game and on the birds. This condition accentuates the need for protection.

Deer exist only in a few counties and on the private preserves or in a few large swamps; same of bear. Doves have been slaughtered ruthlessly by northern visitors to Aiken and Camden, and by native gunners; sometimes several thousand are bagged in a day by one party of gunners.

The Dove now has no protection, being

listed as a game bird but having no closed season. Turkeys have been increasing, owing to the disappearance of their chief enemy, the wild cat, but the disastrous freshet of the present summer decimated young turkeys. Deer also suffered by being out on the uplands, where they fell easy victims to prowlers with shotguns. A case is authentic where a fifteen-year old boy killed thirteen deer in a day, on an island in one of the rivers where the animals had taken refuge from high water.

Up to last winter the sale of game birds went on without check in every part of the state, more than ten thousand (10,000) Partridges (Quail) being found in cold storage at three hotels, in Aiken county, within ten days. This has now been stopped, and the sale of game birds is rare and always done under cover.

Nonpareils, Cardinals, Bluebirds, and other non-game birds have been shipped out of the state in quantities; but this has also been stopped. The Southern Express Company, and the various railroads, have lent assistance in stopping the traffic in game and in non-game birds.

Reports from over fifty (50) wardens show a decided improvement in all lines.

At least two rookeries of Snowy Herons have been located and reported.

Without being able to give a full detailed report of convictions, several hundred have been secured. The offenses were (a) violation of fish laws, and these were most numerous; (b) violations of laws for protection of non-game birds; (c) violations of game laws.

ANNUAL MEETING AND RECOMMENDATIONS

The society held its annual meeting in Columbia, in the chapel of the University of South Carolina, on October 28. All the old officers were reelected but a new board of directors was chosen.

The society passed a resolution favoring the naming of a state fish and game commissioner, to have active charge of wardens and to relieve the society of this burden. The society also favored a resident hunter's license of one dollar.

The work is being actively maintained,

and the full annual report will be issued about December 15, and may be had from the secretary.—JAMES HENRY RICE, JR., *Secretary*, 336 Pine Street, Spartanburg, S. C.

MISSOURI.—Again Missouri is compelled to report little achievement, but much encouragement. Missouri has responded very faintly to all efforts to arouse a sentiment for protecting her wild life, owing to her unfortunate position of having legislative and executive departments completely antagonistical to all effort toward protection or conservation. We have endeavored to arouse interest, but have succeeded only in getting the press interested. This will no doubt be a wonderful help in the future, as the entire press of the state is now advocating new and proper laws. But we feel that Missouri will soon be able to report more progress for the Audubon movement than any other state.

We have just elected as governor Mr. Herbert S. Hadley, and he is an ardent advocate of protection to wild life and the conservation of our natural resources. It is the first time in her history that Missouri has had at her helm an educated, liberal-minded statesman, who recognizes the needs of the state and her people. With the aid of Governor Hadley and the press, we shall probably induce our new legislature to pass a new and much-needed law, thus wiping out the shameful legacy of our last administration.

We have gotten the Park Board of Kansas City to issue an order that all their employees, including policemen and street sweepers, must be able to pass an examination on the subject of birds and their relation to man and agriculture.

We have agreed to furnish free to the park board a sufficient number of bound volumes to enable them to teach this subject to their employees. We intend to bind up pamphlets of the Department of Agriculture and National Association in book form.—H. R. WALMSLEY, *President*.

Audubon Warden Murdered

L. P. Reeves, who was a faithful employee of the South Carolina Audubon Society, was brutally murdered about the middle of September.

He was shot from ambush by an assassin concealed by the roadside only a few feet away. It was just after dark, and Reeves, who was a young and prosperous farmer, was returning home from carrying hands from the fields to their houses. He was shot with a full charge of buckshot, both wads and shot being found in and on the body, which was carried by his mules to Reeves' premises, where he was later discovered.

The assassin had gone down a small branch of about fifty yards, mounted a mule and rode away. Bloodhounds were sent down at once from Columbia, but would not trail the mule and thus the trail was lost in the public highway.

The morning of the same day Reeves was shot, two men bought buckshot shells at St. George, about seven miles away; they had repeatedly made threats against Reeves, and this can be proved. Both are notorious fish-pirates.

These men had been warned by Reeves and threatened with prosecution, and they had resented it bitterly.

Governor Ansel has offered a reward of \$500, but he has not employed a detective. This should be done, and it would be done, but we have no funds at present for such a purpose and are staggering under the burden of enforcing the laws.

The situation has been placed before the governor strongly, and he has been advised to use certain men in ferreting out this crime; this should be done for the honor of the state.

The Audubon people are very much stirred over this murder, and if the assassin is caught he will be hanged.

The whole case is known to several people, and if a detective went in there, he would find out enough in short order to hang somebody. Branchville has long been headquarters for a nest of criminals—about eight in all. They have committed

several murders, have robbed trains and otherwise made a reign of terror in that locality. The people of the community lack courage to take the initiative in wiping them out. That is about all we know at present, but we may know more later.—
JAMES HENRY RICE, JR., *Secretary*.

Third Audubon Warden Murdered

Mr. Columbus G. McLeod, of Placida, Florida, who had charge of the birds

case has been secured, as the body has not been found. The Association boat was discovered sunk, and to keep it down two heavy sacks of sand had been fastened under the thwarts. In the boat was discovered the warden's hat with two long gashes in the crown, which had evidently been cut with an axe. In the cuts were bits of hair and considerable blood, and there was also blood found in the boat. It is supposed that the body of the warden was sunk in the boat, but after-



HOME OF WARDEN McLEOD, NORTH END CHARLOTTE HARBOR, FLA.

breeding at the north end of Charlotte Harbor, and especially the large colony on Devil Fish Key, is supposed to have been murdered on November 30. Mr. McLeod was a man nearly sixty years of age, a bachelor, who had long been a resident of the locality in which he lived, and was, from all accounts, deeply interested in birds, in addition to his being one of our most reliable wardens. The Association had furnished him with Patrol Boat No. 5.

Very little information regarding this

ward floated out and carried to sea by the tides, which are very strong in that part of Charlotte Harbor, and it is unlikely that his body will ever be found, as it is probable that it was devoured by sharks and other flesh-eating fish.

It is not known certainly whether the warden was killed because of his bird-protection work, or for some other reason, although it is surmised that robbery was not the cause, as the contents of his house were not disturbed.

This Association has spent thousands

of dollars in trying to preserve the birds of Florida without any seeming result, as there are far less plume birds in the state than there were when warden Guy Bradley was appointed. As we have already lost two wardens by violent deaths, it does not seem as though the Association were warranted in appointing any further wardens, especially on the west coast, for the present at least; certainly not until the citizens of Florida awake to the value

"In view of the limited time since the establishment of the reservation, bird-life within its confines appears to have had a remarkable increase; Pelicans and Gulls are more numerous than for many years and the increase in numbers of the Blue and Louisiana Heron is already apparent. There are also many large birds which Mr. Pacetti calls the Wood Ibis. The usual fall shooting about the inlet which has been indulged in for years by guests



WARDEN COLUMBUS G. McLEOD

of birds as an asset of the state, and establish a Game Commission in order to see that the bird and game laws are enforced.

Mosquito Inlet Reservation

"I have just returned from a trip over the reservation made with Captain Pacetti, and am much gratified with conditions prevailing there. Very good order exists, there being practically no shooting, and the fact that the Government is in control calls forth the respect of people generally.

of the hotels was entirely discontinued this year, the guests devoting themselves to fishing or going south to Mosquito Lagoon. This has saved a great many birds throughout the reservation, due to warnings and watchfulness of Warden Pacetti.

"On our trip down in the launch, Monday, three of the large signs were placed, one on the high sand-bar near the inlet, the next at a bend in the Hillsborough River nearly opposite Mr. Sams' Hotel, New Smyrna, and one at the south-

great satisfaction. I have forwarded all the leaflets and pamphlets in question to our Ministry of Agriculture, Works and Commerce, in Peking, and I have no doubt it will take into consideration the numerous questions relating to the protection of wild birds and animals so thoroughly discussed in them.

"Assuring you of my sympathy in the work of your association.

Very truly yours,

WEICHING W. YEN."

Japan

The educational and other publications of the Association were also sent, at the request of the Japanese delegates, to Dr. I. Ijima, Sci. Coll. Imp. Univ., Tokyo.

Tokyo, November 10, 1908.

"MY DEAR SIR: I beg to acknowledge the receipt of the publications of the National Association of Audubon Societies. Please accept my best thanks for them. I dare say the issuing of such useful papers should be imitated in this country. I expect they will be of great use to me in many respects, and shall be exceedingly obliged if you will favor me with further donation in case you happen to issue papers of the kind in the future. I am,

Yours respectfully,

DR. I. IJIMA.

Sci. Coll. Imp. Univ. Tokyo."

Recently four Japanese plume-hunters were found upon one of the American Pacific Islands, contrary to the agreement made by Japan with the United States, details of which may be found in BIRD-LORE. (Vol. 7, pp.301-303.)

The schooner Kioko Maru, which left the plume hunters upon Lee Hermes Island, about eighty miles southeast of Midway Island, was never heard of after her departure, and it is supposed that during one of the terrific Pacific storms she foundered. During this same storm, huge seas swept over the island, which is a very low one, and the provisions and supplies left to the marooned men were lost. The hunters subsisted, while on the island, on such fish and sea birds as they

could capture, although one of them, Fukumatsu Sujiyama, succumbed as a result of exposure. The three survivors were taken off by the United States steamer *Flaurence Ward* and were carried to Honolulu.

This violation of the agreement regarding the American Bird Islands in the Pacific has been reported by our Honolulu representative, Mr. William Alanson Bryan, to the State Department at Washington, who will probably call the attention of the Japanese Government to the matter.

Recently the secretary of the Washington Audubon Society, Mr. Rief, discovered in Seattle birds partially prepared for millinery ornaments. These were all seized, and on investigation, were found to have come from Japan. The birds were species of Thrushes, Finches, Bulbuls and Wagtails, with some few shore-birds.

This matter has been called to the attention of Baron Takahira, Imperial Japanese Ambassador, who has asked for a full report upon the matter, in order that he might present same to his home government, with the suggestion that such birds were of vastly more value to Japan while they were alive than the pittance that might be received for them after they were dead and were converted into millinery ornaments.

Legislation

It is gratifying to be able to announce that the Hon. John W. Weeks, of Massachusetts, introduced, on December 8, in the House of Representatives, bill known as "H. R. 22888", which reads as follows:

"A BILL to protect migratory game birds of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that all wild geese, wild swans, brant, wild ducks, snipe, plover, woodcock, rail, wild pigeons, and all other migratory game birds which, in their northern and southern migrations, pass through or do not remain



JAPANESE BIRDS SEIZED IN A MILLINERY ESTABLISHMENT IN SEATTLE, WASHINGTON
A loss to the Agricultural Interests of Japan

permanently the entire year within the borders of any state or territory, shall hereafter be deemed to be within the custody and protection of the government of the United States, and shall not be destroyed or taken contrary to regulations hereinafter provided for.

"Sec. 2. That the Department of Agriculture is hereby authorized to adopt suitable regulations to give effect to the previous section by prescribing and fixing closed seasons, having due regard to the zones of temperature, breeding habits, and times and line of migratory flight, thereby enabling the department to select and designate suitable districts for different portions of the country, within which said closed seasons it shall not be lawful to shoot or by any device kill or seize and capture migratory birds within the protection of this law, and by declaring penalties by fine or imprisonment, or both, for violations of such regulations.

"Sec. 3. That the Department of Agriculture, after the preparation of said regulations, shall cause the same to be made public, and shall allow a period of three months in which said regulations may be examined and considered before final adoption, permitting, when deemed proper public hearings thereon, and after final adoption to cause same to be engrossed and submitted to the President of the United States for approval: Provided, however, That nothing herein contained shall be deemed to affect or interfere with the local laws of the states and territories for the protection of game localized within their borders, nor to prevent the states and territories from enacting laws and regulations to promote and render efficient the regulations of the Department of Agriculture provided under this statute."

As soon as this bill was brought to the attention of the Association, Representative Weeks was written to and asked to have the bill amended by striking out the word "game" between the words "migratory" and "birds," in order that *all* migra-

tory birds should be placed in charge of the Department of Agriculture. A reply was promptly received from him as follows:

"I am inclined to think that you are right in your judgment that other migratory birds than game birds should be included in the provisions of the bill which I have introduced, and, if I can get the bill up in Committee at this session of Congress, I will ask to have that change made. My own limited experience in the South confirms your statement that Robins are killed in great numbers."

The experience of this Association has been that it is almost impossible to obtain uniform legislation for wild birds from the several legislatures in the United States. There are so many diverse interests that place obstacles in the way of such legislation that the ordinary legislator has his judgment warped by local interests. It seems almost farcical that on one side of an imaginary line birds are protected against spring shooting and on the other side of the line they receive no protection whatever. Should this bill become a law after the desired amendment, all migratory birds would then receive uniform treatment at the hands of the experts of the Department of Agriculture. In addition, it would relieve this Association of an enormous amount of legislative work, as it would not be necessary for us to initiate new legislation in any part of the country except for the few resident birds which are ordinarily well cared for, besides which the continual watching of state legislatures would be done away with. The time and expense now devoted to legislative work could be devoted to the more pleasant and profitable work of education.

The members of the National Association and all the readers of BIRD-LORE and other people interested in birds are asked to communicate with their senators and representatives in Congress, urging them to act favorably and speedily upon House Bill 22888.—W. D.

A Reason for Decrease of Bob-white

Some investigations were made by the Executive of the National Association regarding the sale of Bob-white in New York City during the recent open season. These investigations were made, because under Section 92 of the New York State law, Quail shot in the state cannot be sold. The section further provides that Quail taken outside of New York State may be held for sale. Inasmuch as every commonwealth in the United States prohibits the export of Quail, it is evident that all of the birds sold in New York State are birds illegally shipped. This fact must be known to the dealers, because during the investigation a number of boxes of Quail found in the markets were stamped on the outside with a stencil, "pigeons." This false statement was a direct evasion of the law and could have been done only for the purpose of deceiving the transportation companies and the authorities of the state from which the birds were shipped.

The investigation necessarily was very superficial, but enough evidence was found to show that the hotels and restaurants in the city must use an enormous number of Bob-white during the season when these birds can be sold in New York. An order of two hundred dozen for one day was placed by a hotel, and orders for almost twenty thousand birds were given by the prominent hotels and restaurants for the New Year's Eve trade.

Section 92 of the New York law should be repealed, as it places New York in the position of being a "fence" for the sale of illegal goods.—W. D.

Bird Bulletins

Through the courtesy of the State Historical Society of Wisconsin, the Wisconsin Audubon Society has been permitted to place in the halls of the State Historical Museum, at Madison, a number of picture bulletins explaining its own labors and those of the National Association in encouraging the protection of wild birds and animals. Several such bulletins are

now on display. Each consists of from ten to fifteen or more carefully selected photographs or prints. These are tacked, or otherwise fastened to burlap-covered, upright wooden screens, and are accompanied by a centrally posted explanatory label. One of the two bulletins on exhibition at present is devoted to a consideration of "Bird Reservations;" the other to "the Ostrich Farm and Feather Industry." The photographs employed in illustrating the last are kindly furnished by the Cawston Ostrich Farm of South Pasadena, California. The State Historical Museum is visited each year by thousands of educators and visitors from all parts of Wisconsin and surrounding states. By means of these picture bulletins and brief explanatory labels, their attention is attracted to the Audubon movement, and thus many friends are gained for the cause. These bulletins are now attracting such attention that preparations are being made to circulate several among the libraries and smaller museums of the state, where they will be posted for short periods. Their availability for this purpose is being made known through the Wisconsin Library Bulletin.—CHAS. E. BROWN, *Secretary*, Wisconsin Audubon Society.

Bird-boxes

There has been an unexpectedly large demand for the volume "How to Attract and Protect Wild Birds." The subject of attracting birds around one's home by the use of bird-boxes and feeding apparatus is growing more and more popular.

Unfortunately, there is no place in the United States where the suggested boxes for Woodpeckers can be secured. The Association has been making efforts to find a manufacturer who could furnish these boxes at a price approximately as low as they are sold in Germany, but so far it has been unable to secure a manufacturer. As soon as arrangements can be made, undoubtedly there will be a large call for the boxes, as the Association recently received an order for thirty of the Wood-

pecker and Owl cavities, which could not be filled without importing them from Germany.

The Executive Officers of the Association will be very glad to receive data giving the results of experiments with nesting-boxes, similar to the enclosed report just received from Massachusetts.

"I have a small place of about eighty-five acres in Massachusetts, and, after reading your book, I went to work to see what I could do myself. I made a large number of boxes for the birds, and was rewarded from the first day I put them up by seeing a pair of Bluebirds take possession of one, and nearly all the boxes were occupied this summer. I got into a row over it because I killed my neighbor's cat, and nothing I could say or do about the birds would ever recompense her for that. She has another kitten about now, but I shall dispose of it very carefully if it makes any trouble for the birds. I am going to experiment further this coming spring, and I hope to be quite successful."

Cats

The Association is very anxious to secure all the reliable data it can regarding damage done to birds by the house cat. The following is a good example of the details desired:

"My neighbor's cats this past summer (1908) killed all of my lovely Warblers but one, eighteen in all, and two Wrens I know of, two Red-headed Woodpeckers, several other birds whose names I do not know; you will understand my feeling of antipathy for cats. Our Society will not be doing its full duty toward the defenseless birds until it in some manner curtails the liberty of those blood-thirsty creatures."

A Valuable Experiment

Mr. Beebe, curator of birds at the New York Zoölogical Park, is conducting some valuable experiments with Mockingbirds with a view of establishing this beautiful

singer in this vicinity. Mockingbirds are raised in captivity at the Zoölogical Park, and are liberated, hoping that they may become established.

That there may be no check on the experiment by collectors, it is urged that persons who hold permits for scientific collecting will not kill any Mockingbirds, certainly within a fifty-mile radius of the city of New York.—WILLIAM DUTCHER.

Willow Island Fund

As noted in BIRD-LORE, this Association has taken a five years' lease of Willow Island, in the Connecticut River, with the privilege of purchasing the same and making it a perpetual bird refuge. It is hoped that the citizens of Connecticut will start a popular subscription for the purpose.

One bright school girl in Stamford, Connecticut, on reading the note in BIRD-LORE, sent to the Association fifty cents with the following letter:

"I have seen in BIRD-LORE the notice of your desire to purchase Willow Island in bird interests. I want to contribute fifty cents to the fund and enclose herewith that amount.—PEARL AGNES BIGELOW."

It is hoped that hundreds of Connecticut school children, as well as their parents, will follow the example of this ardent young bird protector.

All contributions to the Willow Island fund will be acknowledged in BIRD-LORE.

Mrs. Phillips, through Pearl Agnes Bigelow, \$0.50.

The Agassiz Association

Our advertising pages call attention to the good fortune which has befallen Mr. E. F. Bigelow, whose advancement of nature work, both through the pages of St. Nicholas and as President of the Agassiz Association, is an assurance that the increased opportunities for study and experiment afforded by his new plant will be utilized for the benefit of all concerned.

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THE idea of the book is to interest the reader in the life of the four-footed animals, not in their anatomy, nor in their imaginary sentiments; but in the part they daily play in the world around them, rather than in their position in a museum or a scheme of classification. This presentation of the theme has met with general approval. The critic of *The Independent* believes that it "contains just the information about living and extinct species of mammals, especially those most familiar, which the general non-zoölogical reader demands." *Putnam's Monthly* has declared it "the best book of its kind which has appeared up to the present time." Says the *Chicago Post*: "Ernest Ingersoll has for a long while been doing fine work . . . 'The Life of Animals' is just the book one wishes might be in every home where there are children and young people. Mr. Ingersoll has in excellent degree the knack of presenting in clear, sympathetic and attractive manner scientific information, zoölogical and geological, and with it a free mingling of the historical, the romantic and the adventurous. There is, however, a commendable absence of the . . . exaggeration of the human-like qualities in animals."

Along with this popularity the scientific accuracy of the book is well recognized, and it has been adopted as a book of instruction in colleges. Nowhere else is so intelligently traced the relation between the past (fossil history) and the present of the families in this most important of all animal tribes; nowhere else will be found explained many curious customs, such as the origin of the habit of storing winter food, how the opossum came to "play 'possum," etc.

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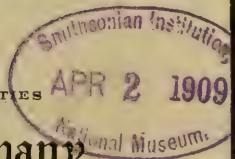
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Bird = Lore

March - April, 1909

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Vol. XI

MARCH—APRIL, 1909

No. 2

Chickadee All the Year Round

By MARY C. DICKERSON

With photographs by the author

HE was only a small gray Chickadee who had found a grain of corn, but had dropped it in the snow as he was flying on his way to the woods. He stopped, hovered in air, then settled lightly beside the hole in the snow where the corn had disappeared. He looked down into the hole and thrust in his bill. But his efforts to get the corn only pushed it deeper in; at least, down Chickadee slowly went—snow over head, shoulders, back and wings—till he was standing on his head, his tail alone showing and that pointing directly to the sky. Then he appeared again vigorously scattering the snow and shaking his feathers. He had the corn! and with a flutter of wings, a rise and a dip, he was off to the woods in an oblique course against the wind.

Chickadee is a very little fellow! He looks small beside all the other winter birds, except the Kinglets; and the fact is, he is smaller than he looks, a tiny body hidden in fluffed gray feathers. You could close your hand over him and leave only his tail extending—except that he would hammer and bite with the same vigor that he shows in everything he does. The downy feathers on his breast are more than half an inch long, while the equally downy ones on his sides and back lack little of an inch. Besides, the colder the day, the more Chickadee fluffs his feathers till he looks like an animated bundle of down, very round, with the tail dropping off behind.

Sometimes his “chick-a-dee-dee” sounds with an anxious ring when the snow is falling and the dusk has come. Facing the wind and with tail straight out in air, he hammers his small black bill into a decaying branch. See the chips fly and hear the “rat-tat-tat-at-at.” At last he drags out some small morsel from the hole he has made. In these difficult days he is glad to examine even the hickory-nut shells left on the stone wall by some red squirrel. He holds each shell down with his feet while he pounds his bill into its crevices searching out tasty fragments. Sometimes for several winter days together he can find no water and must eat snow instead. Again, even the snow has a hard crust and he must do much hammering to get small bits of ice.

When there come days of rain and thaw, life is not so hard. Whole troops of Chickadees hunt the wet twigs, head down as often as head up. They drop to the ground, bird after bird, to search for insects and partridge berries among the wet leaves and the moss.



THE COLDER IT IS THE MORE THE FEATHERS ARE FLUFFED TO INCREASE THE SIZE OF THE NON-CONDUCTING LAYERS OF AIR.

frequently at other times of the year. The first two calls are cheery and more or less musical, but nasal or throaty and relatively commonplace; the third is worthy a musical genius. It varies in pitch, alternating high and low, apparently bird answering bird. Sometimes the songs sound at short intervals with answers almost blending, in an effect of harmony.

It is the first week in June; no flocks of Chickadees have been seen since April, and in the woods where they hunted and sang tall growths of fern replace the carpet of snow and dead leaves.

Approach the woods by way of the meadow adjacent, where the lance-leaved white violet is still common and where the runways of the meadow mouse thread the grass. Yonder a young woodchuck suddenly rises, looking like a ridiculous little bear at this distance, then drops into the long grass, only to rise for a second observation before he scuttles under the stones of the tumble-down wall. Now a chipmunk sits humped over and looks at you, then scampers under the stones.

At the edge of the woods, where tall pink azaleas are in blossom among taller

On rainy days, in winter and spring, Chickadee sings a theme so *unchickadee-like* that one is slow to attribute it to the right source. Near at hand, it sounds somewhat like a Warbler's song though much too forceful and throaty; at a distance, the two emphatic notes in it (though reversed in order) faintly suggest the call of the Phoebe. The theme consists, in the main, of a slurred rise of a third followed by a drop of a fifth (with strong emphasis on the last note), and it may be repeated with the persistency of the Chebec.

Neither this nor the familiar "chick-a-dee-dee" gives any hint of the two sustained flute-like tones (the first higher than the second) that sound through the woods in spring and less

leaning gray birches, Robins and Flickers are making a great outcry. And no wonder! An enormous black snake is under the birches and now departs in haste, the Robins and Flickers following.

"Chick-a-dee-dee-dee!" Only three feet away on the branch of the birch is an agitated Chickadee with a caterpillar dangling in his bill. It seems he had a special reason to be anxious for his nest is in a cavity of one of the decayed birch trunks, the doorway only a foot and a half from the ground.

However, it would be difficult to find the cavity in the birch, for the space is filled up to the door with birds and bedding; six young Chickadees—all well



CONDITION OF FEATHERS ON A WARM DAY

and very sleepy—on what seems an unnecessarily warm bed for June. The thick gray felt that lines the nest is made up of fur from the coats of cotton-tailed rabbit and varying hare, and has some moss mixed with it. It is hard to see how all six of the birds can get their heads uppermost. Besides, it is impossible to understand how they endure the heat from the crowding of their bodies, from their feathers and their fur blankets. But they seem contented and show eager eyes between-times, as well as when the old birds come to feed them. They have only one strong interest in life. They may put in much time preening their feathers; they may climb over their brothers while stretching out one foot and one wing. But they are all of the time merely waiting, listening for a familiar flutter of wings or for a tender "tsip, tsip;" and they respond when they hear it with an amusing chorus of throaty "chick-a-dee-dees."

July passes and August comes. Blackberries are ripe, and winds from the fields bring odors of cut grass and ferns. It is now that families of Chickadees leave the woods to travel along the roadways. They follow one another in undu-



HE STRETCHES WHILE
WAITING



AN ENTHUSIASTIC RESPONSE TO THE
APPEARANCE OF FOOD

lating flight from tree to tree; they call cheerily, scoldingly, sweetly—it sometimes sounds as though half-a-dozen birds were saying “dee-dee-dee” together. This is their leisure time of the year.

Again, in October, when the woods are daily growing in autumnal coloring and the air is vibrant with the calls of insects, the voices of Chickadees come from the roadways. But they sound also from the river margins, the hills and the woods; Chickadees are everywhere. It is still the leisure of the year for them.

But the cold increases and food gets scarce. Group by group birds have journeyed south, but Chickadees remain. Families have united into flocks, which have been still augmented by migrating Chickadees from farther north; winter conditions have returned.

Flexible pine branches droop with snow; every last shrub and weed has its burden; there is no spot where any bird can set his foot, except in snow. It seems incredible that Chickadees who were contented in fur blankets in June can now keep warm without bedding of any sort. For although a few Chickadees sleep in Woodpecker's holes and there is evidence that during storms small birds



THEY KNOW WHENCE COMES THEIR MOTHER'S CALL

of some sort, probably Chickadees, creep into deserted red squirrels' nests for shelter, many Chickadees make their beds in evergreen trees, tucking their heads under their wings on an open roost. It is well that they are wearing thick winter coats of down, and that, among birds, the body temperature is unusually high.

Even now the dusk is approaching the gray of the sunset, brightening to a faint afterglow. A slight wind brings sound to the tops of the pines, and causes here and there a faint thud from falling snow. Suddenly there is a lispig call and a tiny gray bird circles to the pine. Another follows and another, and still others. Chickadee has gone to bed.

A Second Season of Bluebird Tenants

By MARIAN E. HUBBARD, Wellesley College

With photographs by the author

THE nesting of a pair of Bluebirds on a window-shelf, during the season of 1906, has been described in a former number of BIRD-LORE.*

The same pair of birds returned in the following spring and placed their nest again on a window-shelf in the same apartment-house. That they were the same birds was evident, not only from the 'at home' air with which they took possession of the shelf, but especially from the way in which, immediately upon their arrival, they began pecking in the dishes of corn-meal, which contained meal-worms. Their meal-worms had been served in this fashion during the preceding season, and the association had been so firmly made that the familiar sight of the yellow grain stirred at once within their minds memories of those savory hidden morsels.

The new tenement, made, like the old, from an apple-tree bough, but improved by a hinged lid, was on the southeast side of the building. Everything was ready for the tenants on March 20. Bluebirds were seen on the 17th, but it was not until the 24th that they came to inspect the house. Early in the morning of that day the jubilate of the male—that fervent burst of gurgling, purling notes which seems to constitute the wooing song—rang out beneath the window, and a furtive glance through the curtain revealed the female on the nest-porch, peering inquiringly in. It was always she, during these first few days, who each morning examined the apartment to be let, while her escort directed his attention to the café near at hand. From this fact it would appear that she was the one who determined the nesting-site.

The furnishing of the house began on Sunday, April 14, when early in the day both birds came, carrying grasses. Except for this encouragement on the first morning, and for one trip on the last day, the male took no direct share in the construction of the nest. It was the female who toiled to make this ready, bringing her loads at intervals of from three to five minutes. So busy was she

* BIRD-LORE, Vol. IX, pp. 11-15, 1907

that only once or twice during eight or ten trips did she stop to take a worm before she flew away, and the short decisive *chep* which she uttered frequently on leaving seemed indicative of a mind intent on business.

The male during this time was no mere drone. There was the nest to guard and his mate to feed, and he did both gallantly. There was never a knight more



FEMALE BLUEBIRD ON THE HAND, MALE ON THE PORCH. MAY 21

chivalrous than this Bluebird in his devotion to his mate. Seldom did he help himself to a worm without carrying one to her. If she were arranging grasses in the nest, he would either take the worm inside, or with craning neck wait on the shelf-rim below the porch until she reappeared. There was one ludicrous occasion when, seized with a sudden nervous fear of being pecked, he ducked with the worm just as she bent to take it, and three times he withdrew it from her reach before he could muster courage to keep still while she took it from his beak.

After four days of labor the nest was finished on Wednesday, April 17. Then came an interval of two days, during which the birds visited the window little except when they came for food.

On Saturday, April 20, the first egg was laid, and on each day following another appeared, until there were five in all.

Incubation began on April 25, the day after the last egg was laid. The intervals of brooding and not-brooding might well have been described in Finnigan's laconic message, "Off again, on again, gone again." Several careful watches showed that the mother-bird was on the eggs in the early days of incubation two-thirds, in the later days one-half of the time. It would be of interest to compare these intervals of sitting with those of birds which build open nests, and

also to obtain the proportion of time for the first and second broods, in order to discover whether there is any adaptation of sitting periods to temperature.

In this case, at least, the eggs were kept quite warm enough, and they hatched at the end of two weeks, on Thursday, May 9.

It had been six weeks now since the Bluebirds had first come to the shelf, and, on the basis of the acquaintance with human neighbors which had been gained the year before, there grew up an increasing familiarity with the background of a living-room and its human occupant. Their interest in this side of their environment was, it must be confessed, purely a practical one,—it represented to them a commissary department with its dispensing quarter-master, a source of supplies most welcome through a late, inclement spring. They quickly learned the times at which they might look for an issuance of rations, and so weather-wise did they become in signs that the raising of the sash or even the stirring of the curtain drew them quickly to the shelf in eager expectation.

As soon as there were seven mouths to feed, instead of two, there entered in a more compelling force than hunger to overcome their fear. Before the little ones were a week old, both birds, though still a little nervous, were feeding from my hand at the open window, and during the second week they grew quite fearless. If the worms were missing on the shelf, they spied the dishes in the room, and soon they established a regular habit of flying in to help themselves.

During the preceding season the mother-bird had seemed to bear the chief burden of providing food and keeping the nest clean, but this year several watches confirmed the impression that the male was equally active. The removal of the excretal sacs was performed apparently with no regularity. During an hour's watching, on one particular day, not a single sac was carried out. On the next day, during a period of equal length, each parent once removed one. In another



FEMALE BLUEBIRD FEEDING YOUNG. JUNE 4

period of thirty-eight minutes the male carried out one sac, the female two. The irregularity with which this function was seemingly performed raises the question of whether the sacs are ever eaten by the parents, a question which might easily be answered if the nest-house were made with a window in one side.

As early as the third day after the little birds were hatched, they began to give their nestling-notes, a series of syllables like *chéé-cc-cc-cc*, *chéé-cc-cc-cc*, *chéé-cc-cc-cc*, repeated as often as the old birds came with food. These notes were faint at first, but grew louder every day, and they were the only ones until the time drew near for flight. On the afternoon of the day before their début, a faint sound of *túrwee* was once heard within the nest, and twice a little head



FEMALE BLUEBIRD AT THE LEFT, YOUNG BIRD IN THE CENTER, MALE AT THE RIGHT 'TWINKLING' HIS WING. JUNE 4

appeared at the nest-hole. This confirmed the observation of the year before, that the signal-note in the young birds heralds their approaching flight. Another indication of the exit, near at hand, lay in the sound of whirring wings, which began three days before they left the nest.

Friday, May 24, which was the sixteenth day after hatching, was the 'coming-out' time for the young Bluebirds, and excitement ran high. The nestlings were still in the nest at noon, and the parents were busy feeding, flying into and out of the room. Occasionally a little one scrambled up to the nest-hole for a moment, or clung there for a time, gazing out upon the world and calling *túrrit* to its parents, who answered from the trees. Once, as the mother flew in for worms, she spied on the table near the dish a long cedar lead-pencil. It was motionless, it was true, and very large, but it had many of the points of a meal-worm—it was long and rounded, it was firm and smooth and brown—and what a find for a parent with five clamorous mouths to fill! Whatever may have been the mental pro-

cesses which the sight provoked in our Bluebird's mind, the reaction was prompt, and after one unsuccessful attempt she went sailing out of the window with the pencil in her bill. At first thought this might seem a stupid act, but it must be remembered that lead-pencils are by no means so familiar to Bluebirds as they are to us, and the occasion was hardly one to call for abstract reasoning. It was a case of getting food, and the trial-and-error method which the bird employed we should probably have used in a similar situation.

It was an exciting moment for the parents when the first nestling tumbled out on to the nest-porch and then down to the shelf below. They hovered about, scolding loudly, but soon they were feeding both it and the young still in the nest. Number one stayed for some time about the window before it was joined by



MALE BLUEBIRD AT THE DISH, THREE YOUNG ON THE SHELF-RIM. JUNE 10

number two. Once it wiped its bill deliberately on the shelf-rim. Once it fell into the room, and showed some fear as I hastened to pick it up.

Within the nest, the reaction of the young to the arrival of the parents had been tuned to the stimulus of sound or of mechanical vibrations, and it was curious to notice now their failure to respond to the stimulus of sight. The mother-bird's mind could not explain their frequent refusal to open their mouths as she came with food, and she continued to go through the movements of feeding, striking at their heads with the worm still in her bill. Sometimes they reacted after several blows had been rained upon their heads, but frequently they remained unmoved.

Number two had no sooner left the shelf than number three appeared at the nest-hole. Calling *turwee*, but getting no response from its parents, it dropped back to the nest. A little later it scrambled up again, and sat halfway out on the

nest-porch, so that its body filled the hole. Just at this point the father-bird came with a worm, which was evidently intended for the young inside, but when he alighted on the porch, behold, the familiar opening had disappeared. Here was a new and puzzling situation or the Bluebird mind. A rational being would have sought to explain the no-hole predicament by reflection upon the relationships existing between the elements of the old and the new occasions. It would have perceived the connection between the hole, the young bird, and the disappearance of the hole in the two situations, and it would then have applied this knowledge to the solution of the difficulty.* That no such reasoning took place was evident, for the bird poked here and there at the bark and finally tried to push the worm into a crevice at the side. Failing, he gave it up and flew away.

It was a long time before number three felt irresistibly the call to spread its wings in flight, and it was only when urged by number four behind that it finally came out on the porch and tumbled down to the shelf below. Number four came tumbling after, and a minute later number five stuck its head out of the nest-hole. Three minutes more and they were gone, and the curtain rolled down upon this strenuous and exciting scene.

At this point, in the preceding year, there had been an interval of two weeks, during which time neither old birds nor young had come to the shelf. Not so this year. The next morning found the old birds at the window, feeding as usual and then loading up for their scattered brood. So dependent did they become on these supplies that if the sash were down they begged at the window to be let in.

After the first week, the young drew closer to the house, and then their incessant churring notes, as they clamored to be fed, furnished a constant clue to their whereabouts. Nine days after the exodus from the nest, one of the young birds flew up to the shelf and sat there while its parents fed it. It showed no fear, not stirring when the window-sash was raised. After this the rest learned the way. One day I offered one a worm, touching its head and bill, but it made no response except to back away. It was different, however, when the worm was laid in front of it. Even now, as may be seen from this, the stimuli were few which could provoke the feeding reaction.

On the tenth day, one of the young birds flew to the shelf and helped itself to a large piece of yolk of egg. Two days later, without waiting to be fed, one of them suddenly plumped down on my hand, beside its mother, and after picking up a worm that had slipped off to the dish, opened its mouth for more. The mother gathered up a bunch of worms, stuffed them down the expectant throat, and so kept on till all were gone. After that the young birds frequently came to my hand, in a confiding way that outdid the trustfulness of their parents.

On June 8, the family still gathered together at night, and the parents continued to feed the young. Though still more familiar than the old birds, these

*Cf. Morgan, C. Lloyd, *Animal Behaviour*, pp. 59, 138, 140



FEMALE BLUEBIRD AT THE LEFT, MALE AT THE RIGHT; YOUNG ON THE SHELF-RIM CLAMORING TO BE FED. JUNE 11

began now to imitate their parents in flying off more easily at a stir, in sometimes hesitating before coming to my hand. That this was an instinctive imitation, and not intelligent, was clear from the fact that there was nothing in their experience to make them timid. Altogether, the instinct of fear in these young Bluebirds was never strong, as it is in shyer species, and when first developed, at the time of flight, showed itself only under the stimulus of sudden sounds or quickly moving objects. The fear normal to the species grew slowly, beginning with the development of independence, and increasing through instinctive imitation of the parents.*

There were no signs of a second nest upon the shelf, but to eyes unblinded by hope there would have been indications that something was going on somewhere else. In the photographs, taken after June 8, it appears that though the mother-bird still came to the shelf for food, it was the father who was most active in feeding the young. On June 16, the old birds were observed pairing, and the male began to sing his wooing song again. On the next day the father-bird refused to feed his begging offspring, and drove them savagely from the shelf. This sudden change of front rather staggered the little ones, and it took them five days to learn that they were no longer wanted at the old home. Meanwhile the male was feeding his mate once more.

Though the male retained his title to the shelf, both birds, as the days went on, were less constantly at the window, and the female's visits grew more rare and brief. Doubt grew into certainty that her heart was somewhere else, and a little watching of her flight revealed the probable location of her treasure, in an apple-tree not far away. There the nest was found, on July 2, and in

* Cf. Morgan, C. Lloyd, *Habit and Instinct*, p. 182

it two eggs and two young birds. Reckoning back from that date, it will be seen that the intervals for the second brood were as for the first,—that the nest must have been begun about June 8, and the eggs laid between the 14th and the 17th. At this time pairing was observed, and the reversal occurred of the instincts of the male toward the young of the first brood.

It was apparently the mother-bird who decided to make the move. It was all very well to feed her young in a public place,—that was a necessity,—but it was going a little too far to expect her to violate all her instincts for retirement when it came to the selection of a spot in which to lay and brood her eggs.

From July 2 until the 19th I was away. On the 23rd there were Bluebird notes outside the window, and as soon as meal-worms were put out both male and female came, the male a moment later feeding from my hand. Three days afterward the young birds were heard churring in the yard below, and by the 30th they had learned the way to the shelf. They now came each day until the middle of August. Then meal-worms grew scarce, and hard-boiled egg proved less attractive than fresh insects, which they could then get for themselves.

From August 19 until September 27, the shelf was bare again. On the 27th some peanuts were put out as a lure for Chickadees. A male Bluebird came to the shelf, clung to the edge a moment as he looked at me inside the room, gave a single note, then flew away. Again on October 12, early in the morning, a male Bluebird appeared, looked in to the dish of nuts, called *chep* and went away. It is not difficult to believe that, if meal-worms had been served continuously, the whole family might have been fed at the window until November.

When the next spring came, two tenements were for rent, the old one on the east window, a brand-new one in the old place. But no tenants came.



FEMALE BLUEBIRD ON THE HAND, MALE ON THE SHELF-RIM; YOUNG BLUEBIRD ON THE SHELF-RIM CLAMORING TO BE FED. JUNE 11

A Special Bird-Blind

By E. J. SAWYER

IN closely observing certain shy birds, such as Grouse and Wild Ducks, it is not only necessary for the observer to be himself concealed, but he should, as far as may be, *conceal his concealment*.

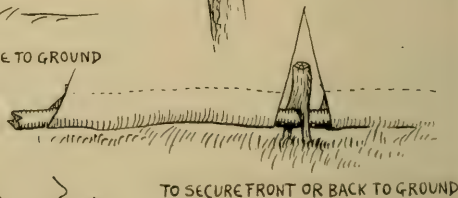
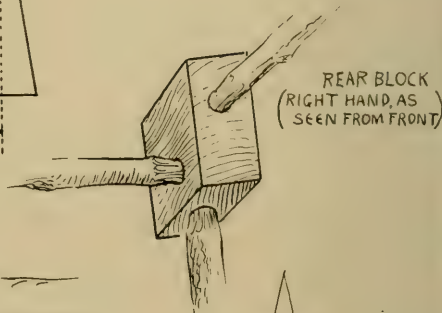
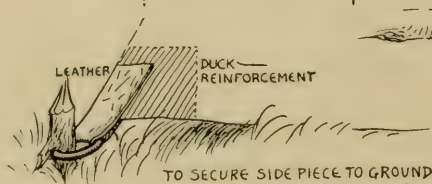
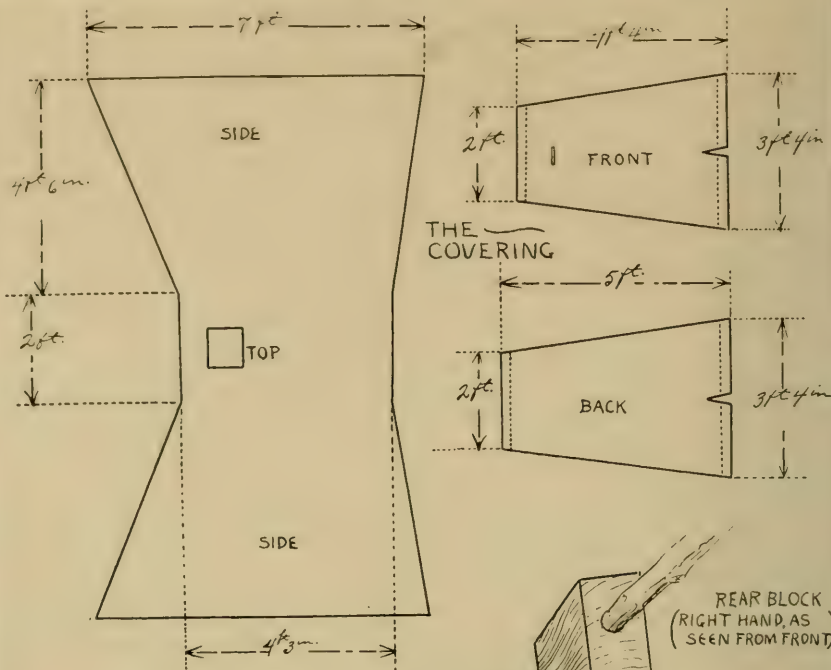
Since it is of prime importance that movement of the observer be not seen by the wary bird, provision must be made for spending from two hours to a whole day or night in the blind. This consists in space for reclining on the ground, or at least for sitting upright on a stool,—a necessity to prevent cramping of the limbs and a lame back. According to your intention, there should be ample room to take notes, sketch or paint, or operate a camera or a moving-picture machine, but no useless space; for the blind must offer, especially in front, the minimum of exposed surface. It should be strong enough to support dead grass, leaves or even sticks. That is, lastly, the structure must be converted into a “blind” indeed.

These provisions are considered in the blind illustrated by the diagram. This is a semi-homemade blind. The portable part consists of the cloth covering and four little wooden blocks.

The Covering.—The kind and color of cloth for the covering will depend somewhat on the nature of the site. It would not be expensive to have on hand two or three covers, one leaf-color, one tree-trunk color, and one, say, dead-grass color. Thus far I have had occasion to use only a green cover, with spruce and cedar tips, for concealment. The loose edges may be tied to the frame with pieces of tape sewed at proper intervals on sides, front and back. The top and bottom of the front and back pieces are hemmed to take a stick. (See cut.) The sides are permanently attached to the top. The front might also be attached to this piece, tent-like, if desired; this would necessitate very careful calculation in fitting the frame to the cover.

The Corner Blocks.—The ends of the sticks which form the frame fit into four blocks bored with a half-inch auger to receive them. There are two pairs of blocks, one pair for the front and one for the back; these differ in that the rear pair have the hole for the upright sticks bored at a gentle angle. To allow for the spread, downward, of the blind, care should be taken to bore the side holes at a proper and uniform angle. A deficiency in the slant of the holes can be corrected in whittling down the sticks to fit them.

The Frame.—This consists, aside from the blocks just described, of eight sticks: Two, three feet, nine inches; two, two feet; two, four feet, four inches; two, four feet, ten inches. Add from two to four inches to the last four, to allow for sinking them in the ground. Besides these supports, cut two sticks about three feet, eight inches long to fit in the hems in the bottom of front and back. The ends of these are braced against the corner stakes and secured in the middle with a forked stick, as shown. The best sticks may readily be found and cut in the field.



PLAN OF A
SPECIAL
BIRD-BLIND

S. SAWYER

DETAILS OF A BIRD-BLIND DESIGNED BY E. J. SAWYER
(Scale: One-half inch = one foot.)

A slot five inches long, horizontally, and three-eighths of an inch wide, affords a good view from the inside and offers little exposure from without. This slot should be cut in the front, about six inches from the top; no other opening should be made unless a camera is to be used. For the latter purpose, a circular hole ten inches below the "slot" is enough, a two-inch opening for a 4 x 5 camera.

A blind like this may be made very inconspicuous, converted into a tussock of marsh grass or a hollow brush-heap; it is large enough for every purpose, and even for a blind, comfortable; yet all the permanent parts can be easily put into two coat pockets.

Eggs of the Flicker (*Colaptes auratus luteus*) Found in an Odd Place

By WILLIAM BREWSTER

IT is known, of course, that the Flickers which inhabit treeless plains in the far West occasionally breed in the faces of earthy banks, somewhat after the manner of Kingfishers and Sand Swallows, and that those found on Cape Cod—where the trees, although abundant, are ordinarily too stunted to afford hollow or decayed trunks of any size—often drill nesting-holes in gate-posts and in the walls of sheds, ice-houses, and other buildings. These departures from the practice of nesting in tree-trunks—usually adopted by the Flicker and almost, if not quite, invariably followed by all other Woodpeckers—are sufficiently interesting and, indeed, surprising. But that the Flicker may occasionally depart even more widely from the normal habit of its kind in respect to its choice of a nesting-place is suggested by an experience which befell Miss Bertha M. Saltmarsh and Miss Helen Farnsworth in 1906. These ladies were spending the summer of that year at West Yarmouth, where, not far from a tidal creek that almost separates the promontory known as Great Island from the mainland of Cape Cod, some cottages and a small summer hotel had been built a year or two before. From this little settlement a straight and wide but neglected road (used, indeed, only in summer, when the hotel and cottages are occupied, and then but seldom, for it is very sandy) leads toward Hyannis through wooded uninhabited country. In one of its stretches, fully a quarter of a mile from the nearest house and bordered on both sides by dense woods of pitch pines, the ladies found five eggs of the Flicker lying together in a hollow in the ground within a few feet of the deeply rutted wagon track. This happened on July 14. As the eggs were evidently deserted, the ladies took two of them at that time. The remaining three were taken four days later, when my friends Mr. and Mrs. William Stone were shown this curious nest (?). I visited it in company with the Stones and Miss Saltmarsh on the 26th of the month. It was a circular, saucer-shaped depression, measuring $21\frac{1}{4}$ inches across the top, by 3 inches in depth. Dry yellowish sand mixed with fine gravel and wholly free from vegeta-

tion of any kind, living or dead, formed its bottom and the gently sloping sides, as well as the surface of the level ground about it for two or three yards in every direction, but a little further back there were weeds and grasses growing sparingly, in slightly richer soil. The pines cast their shade over it at morning and evening, but through the middle of the day it lay in full sunlight. I could see no tracks of bird or beast about it, and my companions had noticed none during their previous visits. Yet it certainly was not a natural hollow, nor did it look like one scooped out by the wind, for it had a well-marked rim, elevated above the surrounding surface, and formed of sand that had been thrown up from within and very evenly disposed on every side, as would hardly have been the case had the wind had anything to do with its formation. It is possible that it had been dug by boys, who may also have placed the eggs in it, perhaps for the purpose of playing a practical joke on someone interested in birds. If so, the work was skillfully done and all traces of its origin were carefully obliterated. To my mind, however, it is easier to believe that the eggs were laid by the bird in the hollow where the ladies found them. She may have chosen it deliberately as a nesting-place—which seems unlikely—or resorted to it without premeditation when about to begin laying, and after having been driven from some tree or building, as is perhaps more probable. If she dug the hollow,—which I doubt—it is difficult to comprehend why she should have made it so very wide, unless, indeed, this was necessary to secure and maintain the requisite depth, because of the loose character of the soil.

That the eggs found in this singular nest (?) originally belonged to a Flicker is beyond question, for typical eggs of this species cannot be mistaken for those of any other bird that breeds in New England, and these specimens were perfectly typical. Two of them were given to me by Mr. Stone and a third by Miss Saltmarsh. In all three, as I found when I blew them on August 2, the contents, although still liquid and smelling abominably, had so shrunk in volume as to fill barely one-half the space within the shell. From this I concluded that they must have been laid a month or more earlier than the date on which they were found, for neither yolk nor albumen will evaporate rapidly through the shells of small bird eggs, even when they are fully exposed to the sun and wind in dry summer weather.



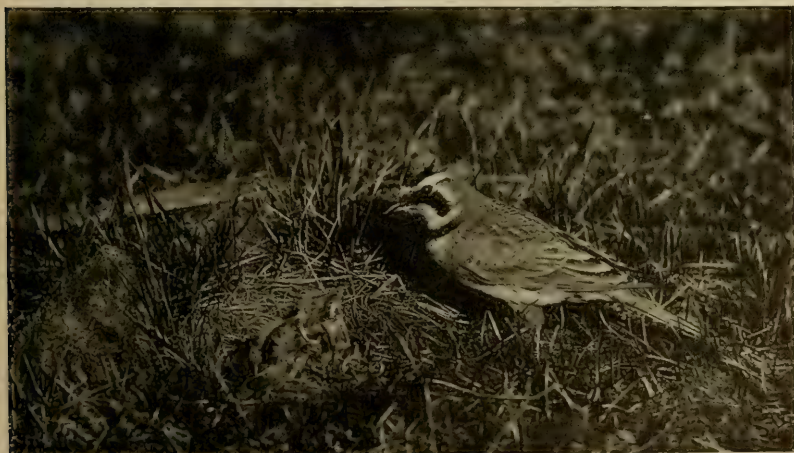


FEMALE LARK ABOUT TO FEED

Where Does the Male Horned Lark Stay at Night?

By R. W. HEGNER

FOR a long time I have endeavored to learn where, while nesting, the male Horned Lark passes the night. The sum total of the results is presented in the accompanying photographs. All this happened in 1901, near Decorah, Iowa. The Lark's nest selected for the experiments contained four young three days out of shell. Their mother was exceedingly solicitous of her progeny's welfare, which made her an easy subject for the photographer. No difficulty was experienced in obtaining good views of both mother and father, as they came to feed their young. However, both birds, apparently, never came to the nest at the same time. This was unfortunate, since a family group was very much desired. An attempt was made to procure such a portrait by waiting



MALE HORNED LARK INSPECTING

until nightfall, when all the members would be gathered about the snug little nest which they called home. Subsequent developments proved that such an evening picture could not be secured because of the absence of a prominent member of the group.

A flash-lamp which could be set off by pulling a string was placed a few feet from the nest; then the camera was put in the proper position and everything was left in readiness for future experiments. At 10 P.M. that evening, I cautiously crept to the end of the string which operated the shutter of the camera. One pull opened the shutter. A pull on the other string resulted in discharging the flash-lamp. The negative obtained shows the mother sitting on the nest, shielding her young from the chilly night air. But where is father Lark? Why is he not at the side of his faithful spouse, doing his duty as a protector to his better-half and children? This question has not yet been satisfactorily answered, and to this day no one knows where the father Lark spends his evenings.



FLASHLIGHT OF THE FEMALE HORNED LARK, TAKEN AT 10 P.M. SHE IS BROODING YOUNG

THE RED-WINGED BLACKBIRD

Near the icy, bubbling springs
By the willow tree,
Boisterously the blackbird sings,—
“Oak-a-lee!”

Scarlet-shouldered, flashing out
Careless-hearted, free,
Suddenly he stops to shout
“Mar-go-lee!”

When the tide of spring up-flows,
Helpless in his glee,
Inarticulate he grows,—
“Gurgle-ee!”

—DONALD BABCOCK



DRUMMING RUFFED GROUSE
Photographed from life by C. F. Hodge

[This photograph, by Professor Hodge, of a bird raised by him from the egg, is of interest to compare with Mr. Sawyer's photographs and drawing from nature of Grouse engaged in the same act. Ed.]

The Migration of Vireos

FIRST PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data
in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

PHILADELPHIA VIREO

This is one of the rarest Vireos in North America, and though not many notes have been received on its movements, yet the data at hand seem to indicate that from its winter home it enters the United States much later than most species, and in its passage thence to its summer home is one of the most rapid migrants.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Elm Grove, W. Va.....			May 16, 1899
Washington, D. C.....			May 12, 1907
Erie, Pa.....			May 14, 1900
Troy, N. Y.....			May 15, 1879
Portland, Conn.....			May 19, 1888
Hollis, N. H.....			May 26, 1876
Waterville, Me.....			May 21, 1863
St. Louis, Mo.....	4	May 7	May 5, 1888
Carlinville, Ill.....			May 6, 1886
Tiffin, O.....			May 9, 1903
Southern Michigan.....	4	May 14	May 10, 1906
Sioux City, Ia.....			May 11, 1903
Lanesboro, Minn.....			May 20, 1884
Aweme, Man.....			May 22, 1907
Chippewyan, Alberta.....			May 23, 1901

FALL MIGRATION

The average date of arrival in the fall at Chicago, Ill., is September 3, and the earliest date August 21, 1895; the average at Washington, D. C., is September 13, and the earliest, September 8, 1896. Some other dates of fall arrivals are: Lanesboro, Minn., August 18, 1888; Forest City, Ia., August 31, 1901; Guelph, Ont., August 27, 1903; Erie, Pa., September 6, 1900; Cambridge, Mass., September 7, 1875; St. Louis, Mo., September 13, 1901. An unusually early migrant was seen August 2, 1893, at Hester, La.

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Dublin, N. H.....			September 29, 1897
Erie, Pa.....			September 25, 1900
Washington, D. C.....	3	September 21	September 22, 1889
Chicago Ill.....	3	September 26	September 27, 1894
Dunklin County, Mo.....			October 4, 1895
New Orleans, La.....			October 10, 1896

WARBLING VIREO

The Warbling Vireo winters almost exclusively in southern Mexico, from which winter home those individuals that are to nest in New England migrate across the Gulf of Mexico and apparently use the mountains as their line of travel; for the species is practically unknown outside of the mountains in the southeastern United States, south of Virginia.

The Western Warbling Vireo is the name given to the form inhabiting the region from the western plains to the Pacific.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
White Sulphur Springs, W. Va.....	6	April 28	April 21, 1891
Washington, D. C.....		April 30	April 21, 1895
Beaver, Pa.....	7	April 25	April 19, 1889
Alfred, N. Y.....	9	May 3	April 30, 1899
Ballston Spa., N. Y.....	11	May 4	May 1, 1896
Portland, Conn.....	7	May 2	April 29, 1888
Jewett City, Conn.....	12	May 2	April 20, 1898
West Roxbury, Mass.....	7	May 5	May 3, 1890
Randolph, Vt.....	7	May 5	May 3, 1890
St. Johnsbury, Vt.....	8	May 8	May 5, 1904
Charlestown, N. H.....	5	May 5	May 1, 1899
Lewistown, Me.....	5	May 10	May 7, 1899
New Orleans, La. (near).....	6	April 5	March 27, 1897
Helena, Ark.....	12	April 11	March 31, 1897
Athens, Tenn.....	5	April 25	April 21, 1902
Lexington, Ky.....	4	April 22	April 19, 1906
St. Louis, Mo.....	7	April 19	April 6, 1893
Bloomington, Ind.....	4	April 25	April 21, 1885
Brookville, Ind.....	7	April 21	April 15, 1887
Waterloo, Ind. (near).....	14	April 26	April 17, 1896
Oberlin, O.....	12	April 26	April 17, 1896
Petersburg, Mich.....	11	April 30	April 21, 1889
Plymouth, Mich.....	11	April 29	April 25, 1896
Strathroy, Ont.....	10	May 4	April 30, 1899
Ottawa, Ont.....	4	May 14	May 6, 1906
Chicago, Ill.....	9	May 8	May 1, 1896
Keokuk, Ia.....	12	April 29	April 19, 1896
Lanesboro, Minn.....	6	May 8	May 6, 1887
Manhattan, Kans.....	9	April 25	April 18, 1896
Onaga, Kans.....	14	April 27	April 21, 1891
Southeastern Nebraska.....	6	May 3	April 27, 1900
Aweme, Manitoba.....	5	May 20	May 15, 1906
Medicine Hat, Alberta.....			May 18, 1894

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Aweme, Manitoba.....	6	August 28	September 2, 1907
Lanesboro, Minn.....	5	September 9	September 15, 1888
Keokuk, Ia.....	10	September 11	September 15, 1895
Onaga, Kans.....	7	September 8	September 13, 1900
Southwestern Ontario.....	5	September 15	September 20, 1903
Oberlin, O.....	7	September 11	September 17, 1906
St. Louis, Mo.....			September 27, 1891
Helena, Ark.....			October 5, 1896
Hartford, Conn.....	5	October 13	October 15, 1906
Germantown, Pa.....	3	August 22	October 18, 1890
Washington, D. C.....			September 12, 1903
Southern British Columbia.....	2	September 3	September 5, 1905
Los Angeles, Cal.....			October 2, 1895

WESTERN WARBLING VIREO

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Yuma, Ariz.....			March 12, 1902
Los Angeles, Cal.....	3	March 25	March 23, 1895
Berkeley, Cal. (near).....	4	April 1	March 28, 1886
Southern British Columbia.....	5	May 8	April 26, 1889
Columbia Falls, Mont.....	3	May 16	May 14, 1895
Banff, Alberta.....			May 16, 1891
Red Deer, Alberta.....			May 16, 1893
Fort Simpson, Mackenzie.....			May 22, 1860

RED-EYED VIREO

This Vireo withdraws entirely from the United States during the winter and returns in late March. It is worthy of note that the date of arrival in southern Texas, near San Antonio, is about three weeks later than in the corresponding latitude of southern Louisiana. This is an extreme example of what is also noted in several other species, that the individuals flying across the Gulf of Mexico to Louisiana arrive earlier than those that make a shorter flight along the eastern coast of Mexico or go entirely by land to Texas.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Northern Florida.....	4	March 21	March 19, 1903
Southeastern Georgia.....	4	March 24	March 19, 1905
Atlanta, Ga. (near).....	12	April 9	April 3, 1902
Charleston, S. C. (near).....	5	April 10	March 29, 1891
Raleigh, N. C.....	18	April 16	April 6, 1888
Asheville, N. C. (near).....	5	April 26	April 12, 1899
French Creek, W. Va.....	5	April 13	April 7, 1892
Washington, D. C.	19	April 27	April 21, 1895
Beaver, Pa.....	4	May 1	April 22, 1889
Berwyn, Pa.....	15	May 3	April 21, 1893
Englewood, N. J.....	10	May 8	May 3, 1905
New Providence, N. J.....	7	May 9	May 5, 1886
Southeastern New York.....	6	May 8	May 2, 1892
Shelter Island, N. Y.....	8	May 14	May 11, 1897
Jewett City, Conn.....	14	May 7	May 3, 1900
Hartford, Conn.....	15	May 10	May 5, 1887
Eastern Massachusetts.....	20	May 9	May 4, 1888
Southern New Hampshire.....	7	May 15	May 8, 1899
Southwestern Maine.....	13	May 17	May 11, 1905
Montreal, Canada.....	8	May 15	May 11, 1887
Chatham, New Brunswick.....	5	May 20	May 14, 1894
Scotch Lake, New Brunswick.....	6	May 20	May 12, 1904
North River, Prince Ed. Island.....	4	May 25	May 18, 1887
New Orleans, La.....	11	March 23	March 18, 1894
Helena, Ark.....	9	April 12	March 30, 1897
Athens, Tenn.....	5	April 6	April 1, 1904
Eubank, Ky.....	7	April 14	April 5, 1892
St. Louis, Mo.....	8	April 23	April 16, 1896
Bloomington, Ind.....	7	April 24	April 19, 1903
Waterloo, Ind. (near).....	14	April 20	April 21, 1896
Wauseon, O.....	11	April 28	April 23, 1890
Oberlin, O.....	13	April 30	April 27, 1908
Petersburg, Mich.....	8	May 4	April 28, 1888
Plymouth, Mich.....	7	May 5	May 2, 1894
Southwestern Ontario.....	18	May 7	May 2, 1898
Ottawa, Ont.....	15	May 16	May 6, 1905
Chicago, Ill.....	13	May 9	May 1, 1899
Keokuk, Ia.....	14	May 2	April 20, 1896
Dewitt, Ia.....	14	May 1	April 24, 1888
Lanesboro, Minn.....	6	May 10	May 7, 1888
Corpus Christi, Tex.....			April 3, 1891
San Antonio, Tex. (near).....	9	April 13	April 9, 1907
Manhattan, Kans.....	5	April 28	April 25, 1891
Onaga, Kans.....	15	May 1	April 24, 1901
Southeastern Nebraska.....	7	May 3	April 29, 1906
Rapid City, S. D.....	3	May 10	May 7, 1905
Aweme, Man.....	10	May 18	May 13, 1898
Northwestern Montana.....	4	May 24	May 19, 1896
Southern British Columbia.....	3	May 27	May 25, 1906
Cascade Rapids, Makenzie.....			May 28, 1903

FALL MIGRATION

Migrants begin to appear in Florida, the latter part of August, and, after taking the long flight across the Gulf of Mexico, they have been noted in southeastern Nicaragua, September 10, 1892, and at San José, Costa Rica, October 9, 1889.

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Okanagan Landing, B. C.....			September 3, 1905
Aweme, Manitoba.....	9	September 11	September 25, 1897
Southwestern Ontario.....	5	September 21	September 24, 1898
Grinnell, Ia.....	5	September 14	September 23, 1889
Oberlin, O.....	7	September 25	October 1, 1906
Chicago, Ill.....	6	September 30	October 6, 1906
Athens, Tenn.	4	October 6	October 11, 1903
New Orleans, La.....	3	October 10	October 16, 1895
North River, Prince Ed. Island.....			September 17, 1887
Scotch Lake, New Brunswick.....			September 21, 1906
Montreal, Canada.....	5	September 6	September 7, 1898
Southwestern Maine.....	6	September 13	October 7, 1902
Hartford, Conn.....	7	October 13	October 25, 1900
Southeastern New York.....	8	October 14	November 3, 1890
Berwyn, Pa.....	12	October 11	October 26, 1900
Washington, D. C.....	4	October 17	November 11, 1888
Raleigh, N. C.....	9	October 8	October 14, 1891
Southern Florida.....	3	October 12	October 16, 1885

BLACK-WHISKERED VIREO

This is one of the very few species that breed in Cuba and do not winter there. The northward migration begins in late February, most of the individuals arrive in March, and by April 20, the species has reached its normal northern limit in the northern Bahamas. A few spend the summer in southern Florida and extend on the Gulf coast as far north as Anclote Keys.



Bird-Lore's Advisory Council

WITH some slight alterations and additions, we reprint below the names and addresses of the ornithologists forming BIRD-LORE'S 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with the objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the eight years that it has been in operation fully equals our expectations; and from both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry sent to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, Biological Survey, Dept. of Agr., Washington, D. C.
ARIZONA.—Herbert Brown, Tucson, Ariz.
CALIFORNIA.—Charles A. Keeler, Cal. Acad. Sciences, San Francisco, Cal.
CALIFORNIA.—Walter K. Fisher, Palo Alto, Cal.
COLORADO.—Dr. W. H. Bergtold, 1460 Clayton Ave., Denver, Col.
CONNECTICUT.—J. H. Sage, Portland, Conn.
DELAWARE.—C. J. Pennock, Kennett Square, Pa.
DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l. Mus., Washington, D. C.
FLORIDA.—Frank M. Chapman, American Museum Natural History, New York City.
FLORIDA, Western.—R. W. Williams, Jr., Dept. of Agriculture, Washington, D. C.
GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.
ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
INDIAN TERRITORY.—Prof. W. W. Cooke, Biological Survey, Dept. of Agr., Wash-
IOWA.—C. R. Keyes, Mt. Vernon, Ia. [ington, D. C.]
KANSAS.—University of Kansas, Lawrence, Kan.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
MAINE.—O. W. Knight, Bangor, Me.
MASSACHUSETTS.—William Brewster, Cambridge, Mass.
MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth Avenue South, Minneapolis, Minn.
MISSISSIPPI.—Andrew Allison, Ellisville, Miss.
MISSOURI.—O. Widmann, 5105 Morgan St., St. Louis, Mo.
MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
NEBRASKA.—Dr. R. H. Walcott, University of Nebraska, Lincoln, Neb.

- NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW HAMPSHIRE.—Dr. G. M. Allen, Boston Soc. Nat. Hist., Boston.
 NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Science, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington,
 NEW YORK, Northern.—Egbert Bagg, 191 Genesee Street, Utica, N. Y. [D. C.
 NEW YORK, Western.—E. H. Eaton, Canandaigua, N. Y.
 NEW YORK, Long Island.—William Dutcher, 141 Broadway, New York City.
 NORTH DAKOTA.—Prof. O. G. Libby, University, N. D.
 NORTH CAROLINA.—Prof. T. G. Pearson, Greensboro, N. C.
 OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 OREGON.—W. L. Finley, Milwaukee, Ore.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Science, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburg, Pa.
 RHODE ISLAND.—H. S. Hathaway, Box 498, Providence, R. I.
 SOUTH CAROLINA.—Dr. Eugene Murphy, Augusta, Ga.
 TEXAS.—H. P. Attwater, Houston, Tex.
 UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
 VERMONT.—Prof. G. H. Perkins, Burlington, Vt.
 VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WASHINGTON.—Samuel F. Rathburn, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.

CANADA

- ALBERTA.—G. F. Dippie, Calgary, Alta.
 BRITISH COLUMBIA, Western.—Francis Kermode, Provincial Museum, Victoria, B. C.
 BRITISH COLUMBIA, Eastern.—Allan Brooks, Okanagan Landing, B. C.
 MANITOBA.—Ernest Thompson Seton, Cos Cob, Conn.
 NEW BRUNSWICK.—Montague Chamberlain, 45 Milk Street, Boston, Mass.
 NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—E. W. Saunders, London, Ont.
 QUEBEC.—E. D. Wintle, 189 St. James Street, Montreal, Can.

MEXICO

- E. W. Nelson, Biological Survey, Department of Agriculture, Washington, D. C.

WEST INDIES

- C. B. Cory, Field Museum, Chicago, Ill.

GREAT BRITAIN

- Clinton G. Abbott, 153 West 73d St., New York City, N. Y.

Notes from Field and Study

The Evening Grosbeak at Williamstown, Mass.

On January 26, I saw three Evening Grosbeaks, one male and two females, under an elm tree in my yard.

There were patches of snow and ice on the lawn, but the birds had, of course, selected a grassy spot where they seemed to be busily feeding. They were not at all timid, and afterwards flew into an adjoining tree where I had a different and quite near view of them.—CAROLINE R. LEAKE, *Williamstown, Mass.*

The Evening Grosbeak at Rutland, Vt.

On Friday, February 12, a female Evening Grosbeak came into a box elder tree a few feet from my window, and both my husband and myself had an excellent view of her. On Sunday afternoon, February 21, two males came into the same tree. They were scarcely ten feet away, and remained for more than ten minutes, feeding on the seeds left on the tree. My husband and I each had a good glass, though the birds were so near we did not really need one, and we were able to identify every feather according to descriptions and a colored plate.

After the birds flew away, knowing that I had seen a rare species for this part of the country, I telephoned to two members of the Vermont Bird Club, one of whom, Mr. George W. Kirk, came out and succeeded in finding the birds in a maple tree a very short distance from where we had seen them, and he fully corroborated my statement.—MARY B. COAN. *Rutland, Vt.*

A Wintering Ruby-crowned Kinglet and Cowbird

I notice that in BIRD-LORE'S Ninth Christmas Census, you comment on the occurrence of the Ruby-crowned Kinglet on Long Island as being noteworthy. It may, therefore, interest you to know that

I positively identified one in the little hamlet of Livingston, Columbia county, over a hundred miles north of New York City, on January 3, of this year. It was quite alone in an apple tree, but flew away before Mr. Clinton Abbott, who was with me, could arrive on the scene. I have no doubt whatever as to the identification, as I was within six feet of the bird with the light in my favor.

Another note of interest is that a perfectly healthy male Cowbird spent the winter of 1907-08 flying around as a boon companion to a flock of a hundred or more English Sparrows at my barn at Rhinebeck, Dutchess county.—MAUNSELL S. CROSBY, *Rhinebeck, N. Y.*

[A Ruby-crowned Kinglet is also reported from Hackettstown, N. J., on January 4, 1909, by Mary Pierson Allen.—ED.]

The Starling at Germantown, Pa.

Recently I saw a flock of about fifteen English Starlings in the neighborhood of Germantown. They were flying fast and rather high, but, from my short acquaintance with them in New York state, I was able to identify them. I have been hoping for them ever since I knew them in 1906, for to me they are far preferable to the nefandum English Sparrow, whose one thought is "battle, murder and sudden death."—GEORGE LEAR, *Germantown, Pa.*

The Cardinal in Massachusetts

Last week (February 1, 1909) a friend of mine at Ipswich wrote me that for the past two or three weeks there had been a beautiful strange bird which had been coming into his dooryard for food. The one that he described was practically red all over with a very bright crest on his head. At my earliest opportunity I visited the farm, to find that when the bird came at noon he was a beautiful Cardinal. He has been there about a month up to the present writing, and comes regularly to

the dooryard for seeds and bread crumbs, which are put out for the birds each day. He keeps very close to the house, practically the entire time living in some very thick clumps of spruce trees not far away. He has gradually become very tame, so that he will come to within some few feet of the people who are feeding him. On the coldest mornings, when the thermometer has registered in the vicinity of zero, his disposition has been of the most cheerful, seeming to mind the cold not in the least, and jumping about very actively, even coming to the window and calling for the food if it has not been put out in time for him.

There are a number of Myrtle Warblers, a few Song Sparrows and Chickadees nearby, which occasionally alight in the trees which he seems to consider as his especial property. This, apparently, troubles him not a little, and he usually drives the intruders away, after watching them for a minute or two.

I thought this item might be of interest to you, as in the course of twenty years of bird study in this vicinity I have never had fortune to meet with the Cardinal before.—FRANK A. BROWN, *Beverly, Mass.*

The Carolina Wren in Massachusetts

I wish to report the appearance of a Carolina Wren in West Roxbury, Mass., near Boston, on November 8, 1908. The bird was seen on and about a wood-pile, and its rufous back and white superciliary line were very conspicuous.—J. I. CODMAN, *West Roxbury, Mass.*

The Color of Male Purple Martins

The male of the Purple Martin is described as a shining blue-black in color. Thirty years ago this was the case. At this time about one out of every seven males is black, and the remaining six are hard to distinguish from the females,

Last year I built houses for eight pairs, and they were all occupied. Seven of the males were gray and one was black. Hundreds of them are here in the sum-

mer, perched on the wires, and it can be seen that about seven or eight per cent of them are black.

Thirty years ago there were no English Sparrows in this vicinity. Can it be possible that the annoying Sparrows have prevented Martins from reaching maturity?—J. F. POAGE, *Kirksville, Mo.*

Tin Cans as Homes for Bluebirds

Having been told by an old farmer that Bluebirds would readily nest in tin cans placed upon poles, I decided to try the plan. So, early in the spring of 1906, I procured sixteen large tomato cans, and nailed them crosswise upon the tops of poles about twelve or fifteen feet long, and placed them around a two-acre lot. As the field was then being plowed, the Bluebirds (which were very abundant) were always flying around to get the worms which the plow turned up.

The third morning after putting up the cans, I noticed some straw in one of them, and, later on in the day, I found that a pair of Bluebirds had begun a nest. The next day two more of the cans were occupied,—one by Bluebirds and the other by English Sparrows. So numerous were the Bluebirds that at the end of ten days the remaining thirteen cans were taken by them, making fifteen Bluebirds' nests and one English Sparrow's nest in the sixteen tomato cans.—ANGUS MCKINNON, *De Funiak Springs, Florida.*

A Martin Colony

I am sending a snap-shot of a colony of Purple Martins which I took last May. This colony of Martins started from one pair, three years ago, and the second year had grown to three pairs. Last year there were nine pairs, the six-compartment cote shown in the picture being full, besides another three-compartment cote.

The Martins arrived on April 15, 1908, which was the earliest I have ever seen them in this section. They usually reach here about May. The cote was situated on a fifteen-foot pole, which made it a

rather difficult task to get a good picture. By placing another pole six feet from the other with a box containing the camera, I finally got the picture enclosed, after several attempts. The arrangement of compartments in this cote is the result of considerable experimenting. This arrangement allows a pair to build in each compartment without interference. Their nesting material consists of straw and sticks, with green leaves picked from the tree-tops for lining. During incubation, the male and the female take turns in sitting, and also in feeding the young. The young left their nests during the third week in July, the number ranging from three to five from each nest, they being nearly as large as the parent birds and capable of flying well. They all remained in this locality until the middle of September, when they disappeared.—JAS. S. BECKER, *Clyde, Ohio.*

Boxes for Purple Martins

From my boyhood I have been an admirer of these beautiful birds, and have learned much of their nature and fancies. Purple Martins delight in the companion-

ship of man, and especially are they at home on the farm.

Like the Wren and the Bluebird, Martins will use any kind of a nesting-place which gives them protection. I have known them to select the forsaken homes made by Woodpeckers in tall trees. The box which I have used measures 12 by 12 inches, its height is seven inches, the width of the doorway is two inches. A resting-porch two or three inches in width is a great convenience. The box is mounted upon a pole thirteen feet above the earth. A scientific fancier of the Purple Martin says that he found by years of experimenting with their wants, that the Martins prefer that height for the home. I keep the boxes in seclusion until the Martins appear, which, in this latitude, is in early April, and this practise is to aid them against that pest, the House Sparrow. Even then I have to maintain a constant war against *Passer domesticus* by tearing out their immense nests which may be built in one day's absence of the Martins.

Some use boxes large enough for several families of these happy birds, but I judge that each pair prefers its own house exclusively.—JASPER BLINES, *Alexander, Mo.*



A MARTIN COLONY

Book News and Reviews

A BIOLOGICAL INVESTIGATION OF THE ATHABASKA-MACKENZIE REGION. By EDWARD A. PREBLE, Assistant, Biological Survey. North American Fauna No. 29, Washington, 1908. 574 pages, 25 plates, 16 text cuts.

This is easily one of the most important contributions to faunal literature of recent years. It treats of the vertebrates, the trees and shrubs of that vast area lying west of Hudson Bay and east of the Rocky Mountains, and from about latitude 54° northward to the Arctic ocean.

For eighty years the 'Fauna Boreali-Americana' has been the standard work of reference on the mammal and bird life of this region. Since the publication of that great work, it has been the scene of much direct or indirect natural history work, either by expeditions sent into it especially to make collections, or by the naturalists of the numerous exploring parties which have visited it; but it has remained for Mr. Preble to summarize the results of their labors, and adding the outcome of his own, bring into one volume all existing information in regard to the distribution of mammals and birds of the Athabaska-Mackenzie region. With the publication of his work, Fauna No. 27 replaces the Fauna Boreali-Americana as the standard book of reference on the Fauna of the region in question.

Mr. Preble was twice sent by the Biological Survey into this field, and on the second occasion remained during the winter. The Survey has also been represented here by Alfred E. Preble, Merritt Cary, and J. Alder Loring, and the routes pursued by these investigators are outlined by Mr. Preble on pages 11-13, 85-125, of his report.

Pages 16-46 are devoted to a description of the 'Physical Geography and Climatology of the Mackenzie Basin;' on pages 49-52 the 'Life Zones of the Athabaska-Mackenzie Region' are defined, and on pages 54-74 we have an excellent résumé of the 'Previous Explorations and Col-

lections' which have been made in this part of the North.

Pages 251-500 are devoted to the birds, of which 296 species and subspecies are treated. From the standpoint of distribution, the region is of exceptional importance. In it some eastern birds find their western limits, and some western birds their eastern limits; while birds of southern origin here reach their northern limits, and Arctic species, their southern limits.

The result is a most interesting mixture of eastern and western, northern and southern species, but an abundance of specimens has enabled Mr. Preble to deal satisfactorily with the question of the identity of representative forms, while his prolonged stay, on his second trip, gave him an opportunity to secure many data in regard to migration.

It is not possible to speak in detail of Mr. Preble's copious notes on birds, which sometimes cover two or three pages on a single species, and we close this inadequate notice by heartily congratulating him on the success with which he has prosecuted his explorations and the no less admirable manner in which he has presented their results.—F. M. C.

MY PETS: REAL HAPPENINGS IN MY AVIARY. By MARSHALL SAUNDERS. The Griffith and Rowland Press, Philadelphia. 12mo.; 6 colored plates; 28 text cuts, 283 pages.

The aviary, to whose inhabitants this book is devoted, has evidently been an asylum in which various stray birds have found a refuge for a time, while the author administered to their wants and studied their ways. Even such unusual "pets" as the Purple Gallinule, and Mother Carey's Chicken, or Petrel, have partaken of her bounty.

Pets these pensioners have been in the best sense of the word. Their hostess has not been their keeper, but a friend, who has found the pleasure of their companionship

more than sufficient return for the care, food, and shelter which, properly furnished to creatures wholly dependent upon us, means the expenditure of much thought and time on our part.—F. M. C.

REPORT OF THE CHIEF OF THE BUREAU OF BIOLOGICAL SURVEY FOR 1908. By C. HART MERRIAM, Chief. From the Annual Reports of the Department of Agriculture, pp. 1-22.

An adequate review of this summary of the activities of the Biological Survey for 1908 would practically entail its reproduction entire, but a mere statement of its major headings will at least convey an idea of the increase in scope and importance of the Survey's investigations.

Under 'Economic Ornithology and Mammalogy' we have the results of studies of the economic relations of 'Wolves and Coyotes,' 'Field Mice,' 'House Rats,' 'Deer Farming,' 'Fox Farming,' 'Relation of Birds to the Cotton Boll Weevil,' 'California Birds in Relation to Fruit Industry,' 'Food of Wild Ducks,' 'Food of Woodpeckers,' 'Mosquito-eating Birds,' 'Birds in Relation to the Codling Moth,' 'Grosbeaks,' 'Spread of the English Sparrow in Southern California,' 'Means of Attracting Birds.'

This splendid showing is followed by a synopsis of the work of the year on 'Geographic Distribution,' and on 'Game Protection.' The field covered by the Survey's Department of Game Protection widens annually and its influence, in a variety of ways, is manifested throughout the country. For example, we have here brief reports on the general subject of 'Game Protection,' on the 'Importation of Foreign Mammals and Birds,' 'Bird Reservations,' 'Protection of Game in Alaska,' 'Stocking Covers,' 'Quail Disease,' 'Coöperative Work,' etc.

The publications of the Survey for the year include five Bulletins, one Farmers' Bulletin, four Yearbook Articles, four Circulars, the Report of the Chief for 1907, and the reprint of former publications.

The Outline of Work for 1909 shows no decrease in the energy and foresight with which the work of this distinctively

American 'Bureau' of scientific investigation will be prosecuted.—F. M. C.

The Ornithological Magazines

THE AUK.—The January number contains an unusual amount of information relative to the habits of various species of birds, and an article on the 'Nesting of the Bohemian Waxwing (*Bombycilla garrula*),' by Mr. R. M. Anderson is the one possessed of most novelty. Very few North American nests of this bird have previously been taken, largely on account of its far northern distribution and the careful concealment of its nest. It will be noted that the Waxwings, by a new shuffle of the nomenclature cards, lose the long-familiar generic name *Ampelis*.

Dr. C. W. Townsend portrays 'Some Habits of the English Sparrow (*Passer domesticus*)', as seen in the city streets where the birds merely participate in the rudeness, noise and aggressiveness of modern urban life. At page 78 figures are presented in evidence to show that the struggle for existence produces larger bills. If Dr. Townsend had said larger mouths we would easily believe it judging by the vocal rows we have all listened to. Quieter residents are 'The Virginia and Sora Rails nesting in New York,' of which Mr. J. A. Weber writes, and they afford still another illustration of how a species will cling to its ancestral nesting-site at long as it remains possible for it to do so. Adaptation or extermination are the alternatives birds have to face, and Mr. Wm. Palmer touches upon this in his paper on 'Instinctive Stillness in Birds.'

Mr. N. A. Wood has 'Notes on the Occurrence of the Yellow Rail in Michigan'; L. J. Cole tells of 'The Destruction of Birds at Niagara Falls,' Mr. G. Eifig contributes 'Winter Birds of New Ontario and Other Notes on Northern Birds,' and there are brief lists by S. G. Jewett on 'Some Birds of Baker County, Oregon,' by A. Brooks on 'Some Notes on the Birds Okanagan, British Columbia,' and by C. Sheldon who gives a 'List of Birds Observed on the Upper Toklat River near Mt. McKinley, Alaska, 1907-1908.'

It is to be regretted that Dr. C. W. Richmond's 'A Reprint of the Ornithological Writings of C. T. Rafinesque' was not reproduced by photography from the original. If such reprints are worth doing, they ought to face the camera and thereby escape possible errors.

Last, but not least, we find a brief account of the 'Twenty-sixth Stated Meeting of the A. O. U.' prepared by the Secretary. Valuable contributions to the present number of 'The Auk' are the numerous reviews from the indefatigable pen of Dr. Allen, our able editor. He does not receive from members of the A. O. U. one-half of the coöperation he deserves, and it is no fault of his that illustrations are lacking from the pages before us. Let bird students take the hint and help with pens and cameras.—J. D., Jr.

THE CONDOR.—The number for November, 1908, which completes the tenth volume of 'The Condor,' opens very appropriately with a paper entitled 'Retrospective.' In this article, Kaeding reviews not only the history of the magazine during the decade of its existence, but also the history of the Cooper Ornithological Club, founded in 1893, which first had for its organ 'The Nidologist,' and later 'The Condor.' The importance of this journal to ornithological work in California can scarcely be overestimated, for besides the special publications of the Cooper Ornithological Club, the reports of the Fish Commission, and perhaps a dozen other articles, 'The Condor' contains "practically all that has been published on the Pacific Coast" on ornithology since 1898.

The present number is conspicuous by the absence of the usual local lists, but contains two faunal articles on widely separated regions. 'From Big Creek to Big Basin' is an interesting account of the characteristic birds found by Ray and Heinemann in the redwood belt of Santa Cruz county, California, in June, 1908; and 'A Month's Bird Collecting in Venezuela,' is an entertaining narrative of the experiences of Ferry and Dearborn, while

collecting for the Field Museum of Natural History in April, 1908. Incidentally it may be noted that the Redstart, the Water-Thrush (*Seiurus noveboracensis* subsp.), and the Lesser Yellowlegs, were found in the vicinity of Caracas.

'The Arrangement of an Oölogical Collection' is discussed by Massey; Willard describes the nesting habits of the Plumbeous, Stephen's, and Western Warbling Vireos in the Huachuca Mountains, Arizona; and Anderson contributes some observations on the 'Nesting of the Pine Siskin at Great Slave Lake.' Prof. Ritter discusses briefly 'Mr. Rockwell's Suggestion of Coöperation in Ornithological Studies.'

Among the brief notes may be mentioned the capture of a specimen of the Louisiana Water-Thrush (*Seiurus motacilla*) at Mecca, California on August 17, 1908, by L. H. Miller. This is the first record of the species for the state. Chambers states that the Least Tern "seems to be on the increase at nearly all of the breeding-grounds in Southern California." Grinnell, who has recently examined the specimen of the alleged 'Cape Robin' taken at Haywards, in 1882, concludes that it is a "pale extreme of the Western Robin."

The volumes of 'The Condor' have gradually increased in size from 148 to 252 pages, the tenth volume containing 40 pages more than any previous one in the series.—T. S. P.

Book News

Second editions of Mr. Edward Howe Forbush's important papers, 'Two Years with the Birds on a Farm' and 'Decrease of Certain Birds, and Its Causes with Suggestions for Bird Protection,' and a third edition of his 'Birds as Protectors of Orchards' have been issued by the Massachusetts State Board of Agriculture.

In response to an unexpectedly large demand D. Appleton Company, publishers of Chapman's 'Camps and Cruises of an Ornithologist' are printing a special edition of that book for the English trade.

Bird-Lore

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Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

FROM every side come exceptionally early records of the return of the birds. At Englewood, N. J., on February 22, Red-winged Blackbirds, Meadowlarks, Song Sparrows, and Bluebirds were singing freely; and on the same date, at Plainfield, N. J., Mr. W. DeWitt Miller reports hearing two Woodcocks singing!

The effects of the high temperature which, so to speak, has started the birds growing, is also visible in the plant world, skunk cabbages, hepatica, alder, and willow, all being found in bloom in February.

About New York the European Starling's voice has now become a characteristic part of the spring chorus, and one half resents the intrusion of its strange notes among those which association has made particularly dear to us. The Starling's occasional habit of mimicry introduces a new element in the identification problem. A few days since we were not a little surprised to hear one give a capital imitation of a Wood Pewee—surely an unusual bird song for February.

REPLYING to our editorial in the last issue of BIRD-LORE, the field student asks "What do you consider constitutes satisfactory identification of the bird in nature?"

We have before answered this question at some length (BIRD-LORE IV, 1902, p. 166), numbering among the requirements of adequate field identification: "(1) Experience in naming birds in nature,

and familiarity at least with the local fauna. (2) A good field- or opera-glass. (3) Opportunity to observe the bird closely and repeatedly with the light at one's back. (4) A detailed description of the plumage, appearance, actions and notes (if any) of the bird, written while it is under observation. (5) Examination of a specimen of the supposed species to confirm one's identification."

The fifth requirement cannot, of course, be always complied with, nor is it essential. Indeed, the actual identification of the bird seen may be left to some one else to whom the field description, or, what is far better, the field *sketch* may be submitted.

We may claim a somewhat extended experience in identifying, or attempting to identify, descriptions of "strange birds," and among the hundreds received none is so satisfactory as the sketch in colored crayons or water-color. It may be the crudest outline and in ridiculous pose, but at least it is definite. There is no possibility of error through the wrong use of terms, the observer draws or charts what he sees. Neither art nor skill is required. Any one can learn to make the outline of the normal bird figure as readily as he can learn to make the letters of the alphabet, and a little practice will enable one to give the characteristic shape of bill, wings or tail. Typical passerine outline figures may be made in advance in one's note-book, and the shape of bill and color may be added *while the bird is under observation*. If the sketch cannot be completed, if essential features are lacking, it is obvious that the subject has not been seen with that definiteness upon which satisfactory field identification should rest.

So, in reply to our field-student's query, we say, purchase a box of colored crayons and a sketch-kook, and, before the waves of north-bound migrants reach you, learn to make and color simple bird outlines. You will be surprised at the ease with which this can be done, and your growing collection of bird maps or diagrams will possess for you far greater interest than the most carefully worded descriptions.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by MABEL OSGOOD WRIGHT

Address all communications to the Editor of the School Department, National Association of Audubon Societies, 141 Broadway, New York City

From Ceylon

[The following letter from one of the younger members of the National Association from Ceylon will be of great interest to the readers of BIRD-LORE. It is especially interesting from the fact that it shows what a bright, observant child can do in the way of field observation.—W. D.]

I stepped out on the lawn one beautiful morning when I heard a dear little Honeysucker singing in the camelia tree. He seemed very tame. He stood on a limb about six feet above me. In a minute I saw another, and then a third. They flew around in the camelia tree and snatched little insects from the leaves. Then they flew on to the gutter of the bungalow, which was a few feet away. They disappeared down in the gutter, and, in a second, all that one could see was the splashing of water. They sat on the edge and preened their feathers and repeated this for at least a dozen times. The Honeysucker is a smart-looking little bird; male, back olive-green, head chestnut-brown, white ring around eye, throat pale yellow, no wing-bars, bill black, nearly half an inch long; female resembles male, but without yellow, and darker gray on the sides. There are a great many beautiful birds in Ceylon, but many of them live at a high altitude. One sees very few birds in Colombo, the chief port of Ceylon.

Although these birds are very brilliant, they are not so fine as the Warblers, Finches, etc., in America. A great many small birds on the island are destroyed by a quantity of large birds, such as Hawks, Eagles, and Kestrels. I have taken notes of several birds, but I am not able to give their names, as there is no book I know of on birds, except one (Legge's), which is out of print. One little bird that I caught sight of flew on to a nearby bush. It paused there just long enough for me to see that his back was dark plum-color, neck black, breast yellow, belly white. This is another kind of Honeysucker. The Ceylon Robin is a symphony in black and white—somewhat like the Towhee in size and form, male and female alike—back glossy black, neck black, breast white, also belly; two white wing-bars. One sees them more in Colombo.

The Ceylon Kingfishers are beautiful birds. The back is a turquoise-blue, head maroon. I have not seen them very closely, as they are generally down in the paddy (rice) fields. They have beautiful Woodpeckers on the island. They are all bright green, except the head, which is brown and yellow. One of the very common birds is the Wagtail. They are about the size of the Catbird. They have a way of walking along jerking their tail. Male, back dark gray, breast yellow, wings mixed with white. Female, the same, but with white breast. They

have what they call a Golden Oriole, which is very much like the Baltimore Oriole. One sees it only in the jungle. The place where I took these notes is 4,150 feet above sea-level, 6° north, on a tea estate in the province of Uva.

HELEN GORDON CAMPBELL.

A Foster-mother

Little Frances Mulholland, of Cleveland, New York, last spring found in her father's garden a young bird which had either been lost or abandoned by its parents. She could not see it suffer, so she became its foster-mother and carefully reared it, and still has the bird in her possession, having received special permission from the Game Commissioner of the state to keep it. The bird proved to be a Robin, and when it acquired its full plumage, it was pure white, instead of the ordinary red and brown of a Robin; the bird also has pink eyes.

Frances writes: "I send you a picture of myself, taken with my White Robin. It is now very tame and quite a large bird. Papa says that if you can find a better home for the Robin than it has here, we will be pleased to let it go, for, if it should die, we would think we were to blame."

W. D.

A Junior Member

"Please find enclosed draft for five dollars. I wish to join the National Association of Audubon Societies. I have wished to join for nearly two years, but have not had the money.

I am eleven years of age, and am very much interested in the work the Association is doing. I learned of the Association from BIRD-LORE, which I have taken for two years. We have very many species of birds in Wisconsin." (Signed)

MALCOLM PITMAN SHARP.



A FOSTER-MOTHER

THE SHARP-SHINNED HAWK

By EDWARD HOWE FORBUSH

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 37

We can say much in favor of most land birds, but the Sharp-shinned Hawk is an exception to the rule. From the standpoint of the utilitarian, it must be regarded as bad, and even vicious. It is a bold marauder, and, judged by the standard of the poultryman, the game-keeper, the sportsman, or the bird-protectionist, it is a convicted felon. Its trade is battle, murder and sudden death, and, unfortunately, the greater number of its victims are the weak and defenceless young of game birds and poultry, and the beautiful and useful songsters of field, farm, grove, orchard and forest.

This small bird is one of a group of "ignoble" Hawks,—
Kindred the Accipiters—which may be distinguished from the Sparrow-Hawk, Pigeon-Hawk and other Falcons by their comparatively short, rounded wings and their long tails. The Falcons have a slightly shorter tail and long, pointed wings. The Buteos, or Buzzards, have long, broad wings and a broad tail, and often soar in circles; but the Accipiters move across the country by alternately flapping and sailing. The Sharp-shinned Hawk is the smallest of the Accipiters, and is sometimes wrongly called the Sparrow-Hawk or Pigeon-Hawk. In general appearance and habits, it resembles two larger species, Cooper's Hawk and the American Goshawk. Cooper's Hawk is next in size to the Sharp-shinned Hawk, and the two are much alike in appearance. The adults of each species in some parts of the country are known as 'Blue Darters.' These three species, because of their numbers, wide distribution, and great rapacity, probably commit greater and more widespread havoc among birds and game than any other Hawks in North America. The larger pernicious Falcons are generally far less common than the Accipiters, and the Buzzard Hawks and Marsh Hawks are generally more useful than injurious to man.

The Sharp-shinned Hawk is larger than either the Sparrow Hawk or the Pigeon-Hawk, and is rather longer and slimmer. Specimens average a little over a foot in length. The largest specimens are about two inches smaller than the smallest specimens of the Cooper's Hawk. The plumage at full maturity is usually slaty or bluish gray above; the under parts are whitish, barred and marked with reddish. Immature birds are brown above and streaked with dark brown or reddish brown below. The tail is square-tipped and somewhat heavily barred.

Range The distribution of this Hawk is nearly co-extensive with the continent of North America. It breeds throughout most of the United States and Canada, and winters from the latitude of Massachusetts to Central America. In September, numbers of these Hawks may be



SHARP-SHINNED HAWK

(RIGHT HAND FIGURE, IMMATURE FEMALE; LEFT HAND FIGURE, ADULT MALE)

Order—RAPTORES
Genus—ACCIPITER

Family—FALCONIDÆ
Species—VELOX

seen high in air, migrating southward in a leisurely manner, and so they follow the southern flight of the smaller birds on which they prey.

Nest, Eggs and Young From April until early June, according to the latitude, the wooing of the Hawks begins. Perched in an exposed position, the male issues his shrillest call notes, moving about from place to place until a female responds. The ardent courtship is soon over and then the happy pair fly away in company to select a suitable nesting-site. Nest-building occupies about one week. The nest is usually placed rather high in an evergreen tree, in some sequestered locality. More rarely, it is located in a deciduous tree, in a hollow tree, or on some lofty ledge or cliff. Sometimes an old Crow's nest or a squirrel's nest is utilized as a basis upon which to construct the home. In this case the nest is a large, conspicuous structure; but, ordinarily, it is not very noticeable, and, in some cases, it is well concealed by the foliage. It usually consists of a platform of sticks, resting on a whorl of branches and fixed against the trunk of the tree. Dry grasses and strips of bark are usually placed upon this foundation and interwoven to form the nest lining. Some nests are less skilfully formed and are unlined.

The eggs vary in number from three to five, and are pale white, greenish or bluish white, very heavily blotched, spotted and marked with light brown, dark brown, drab, fawn and lavender. These markings often form a ring about some part of the egg. Both sexes join in incubation, and in the care of the young, which, when first hatched, are covered with soft white down.

The young are confined to the nest for about four weeks. Then they begin to climb and flutter about among the branches; but, if undisturbed, they remain in the vicinity of the nest for several weeks longer, where they are still fed by the parents. The woods now resound with their shrill, squealing cries. Having finally strengthened their wings by exercise among the tree-tops, they attempt longer flights, and soon leave their home forever.

Habits and Food This bird is a model of activity and courage. Probably none of the raptorial birds is proportionately its superior in prowess.

Its every movement is marked by nervous haste. It is fierce, swift, impetuous—the embodiment of ferocity and rapacity. It does not hesitate to attack birds much larger than itself. Mr. C. J. Maynard tells of one that struck a Night Heron in mid-air, dashing it to the ground. Not seldom it strikes and kills other birds or mammals so large that it cannot carry them away. It has been known to kill and carry off a young pullet so heavy that its toes dragged on the ground. I saw a clamorous Crow follow one of these Hawks and attack it, but the little bird turned on the sable tormentor and drove it ignominiously from the field. Indeed, the Crow was fortunate to escape with its life, so fast and furious was the onslaught of its small, but spirited antagonist. Occasionally a mob of Bluejays will follow and malign one of these Hawks until it becomes enraged and dashes to earth one of the screaming crew, all of whom hasten to escape, leaving their comrade to its fate.

This Hawk hunts forest, orchard, field and meadow. In wooded regions it is very destructive to young poultry. Being small and inconspicuous, it can glide quietly into a tree near the poultry-yard, and, watching its chance, dash down diagonally at breathless speed, seize a chicken, and get away before the startled mother hen can come to the rescue. I have even seen the villain sitting impudently upon the gate-post of a chicken-yard, awaiting its chance; but more often it comes low over the ground, just clearing the fence-tops, and is gone with its prey in a moment. A single pair of these Hawks has been known to get twenty or thirty chickens before the owner realized the cause of his loss. Mr. Ora W. Knight writes that a pair of these birds took ten or twelve chickens daily from a farm-yard for some time before they were shot. Like others of its genus, the Sharp-shin moves ordinarily at a moderate height, alternately sailing and flapping, and always on the lookout for game. As it crosses a river and sails over the meadow, an officious Blackbird rises from its nest in a tussock of reeds, and advances to the attack. The unhappy bird soon realizes its mistake, and, turning, makes for the shelter for the wood, but the Hawk rows the air rapidly with its wings, gaining on the poor Blackbird each second. It follows its quarry through wood and thicket, matching every twist and turn; swift, inexorable and relentless as fate. It can overtake and slay a Bob-White in full flight. It sweeps quietly along a wood path and rises to a dead branch, where it stands almost motionless, scanning all the ground and every tree and thicket, but the little Warblers of the wood have been warned of its approach and, crouching in terror, they will not leave their hiding-places. Impatiently the Hawk leaps forward on the air and soars off to take some heedless songster unawares. The individual Sharp-shins that spend the winter in the North are the hardest of their species, and their boldness at this season is unsurpassed. More than once this Hawk has dashed into or through a window in winter to strike down a caged Canary. On a cold and snowy day in January one bore down a Bluejay within a few feet of my dog. Doctor Hatch records that while he was riding across the prairies of Minnesota in winter during a furious wind, with the mercury 46° below zero, one of these Hawks passed with inconceivable velocity, close to the ground and seized and bore off a Snow Bunting directly in his path. Sometimes, in such instances, the victim appears to be paralyzed with fright. One winter, one of these Hawks swept into our yard, darted into a flock of Juncos feeding there and seized one that remained crouched on the ground and seemed unable to move until the Hawk struck, while its companions made their escape to the thicket.

Some writers have given the impression that it is impossible for any bird to avoid the sudden and swift attack of this Hawk. Nevertheless it sometimes misses, and loses its prey. A Phoebe, sitting on a low branch near the barn cellar, which contained its nest, dove from the limb, escaped the Hawk's talons, turned the corner of the barn and entered the cellar so quickly that the confused Hawk flew away disappointed. A flock of Least Sandpipers or 'Peeps' scattered so

deftly on the onslaught of this Hawk that all escaped unharmed; but perhaps such a happy consummation is the exception, and not the rule.

Evidently the Sharp-shinned Hawk delights in the chase, and prefers birds to any other food. Dr. A. K. Fisher, of the Biological Survey, reports as follows on the contents of one hundred and seven stomachs of this Hawk that contained food. Six had poultry or game birds, ninety-nine contained other birds, eight contained mice, and five had eaten insects. Dr. B. H. Warren examined nineteen stomachs of this bird, seventeen of which were found to contain remains of poultry or game birds.

This Hawk undoubtedly eats nearly if not quite all the smaller useful species of land birds, and it feeds to some extent on mice, shrews, frogs, lizards and insects.

Its destructiveness is emphasized, but the folly of classing all Hawks and Owls together as injurious is shown, by an experience at my home at Wareham, Mass. In 1906, a pair of Screech Owls built their nest and reared their young in a box that we put up for them in a pine grove. This grove was a noted Robin roost and many birds nested in the vicinity. During the season the Owls killed one Robin, a Red-winged Blackbird and several Bluejays, but they subsisted chiefly on mice, and fed their young mainly with mice. The smaller birds increased in numbers during the Owl's stay (possibly on account of the consequent reduction in mice and Jays). All the smaller birds seemed to have entered on an era of prosperity, and they were more numerous on the farm in 1907 than in 1906. In 1908 we were away until July. The Owls had disappeared, and a pair of Sharp-shinned Hawks had a nestful of young in the grove. During July and August these Hawks so harried and destroyed the birds of the neighborhood that practically all were killed or driven away, except two pairs of Song Sparrows and a pair of Robins near the house. For the first time in our experience, the Robin roost, which was formerly haunted by hundreds if not thousands of Robins in summer, was now deserted, and the cries of the Hawks were about the only bird notes heard in the grove. The contrast between the effect produced by these Owls and that caused by the Hawks was so marked as to leave no room for doubt regarding the utility of the Screech Owl and the harmfulness of the Sharp-shinned Hawk.

With the increase of game preserves, in this country, and the increased destruction of vermin, the Sharp-shinned Hawk must gradually disappear, for the game-keeper is this Hawk's inveterate enemy. Let us hope that the useful and comparatively harmless Hawks and Owls may not suffer from the game-keeper's activity, or for the faults of the three species of true bird hawks, but that such discrimination may be used by the game-keeper, the farmer, and the sportsman, that the real culprits will be the only sufferers.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 141 Broadway, New York City

Legislation

FEDERAL.—The Weeks bill in Congress, referred to in the February number of BIRD-LORE, did not get out of committee before the conclusion of the Sixtieth Congress, and, therefore, it must and will be re-introduced at the commencement of the Sixty-first Congress in December next.

The members of the National Association and the readers of BIRD-LORE throughout the country can do a great deal of excellent missionary work in the interim if they will see their Senators and Representatives while they are at their homes during the summer months, and urge the passage of the Weeks bill.

If all the migratory birds can be placed in charge of the United States Department of Agriculture, it will be a decided gain in many ways, because uniform regulations for their protection will be established by the Federal authorities.

After years of effort by the National Association, it is found practically impossible to obtain uniform legislation from state legislatures, and the only practical way to get uniformity is through a Federal statute. It is hoped, therefore, that this matter will be taken up actively during the summer months by all of the readers of BIRD-LORE. In addition to getting uniform legislation and protection for the migratory birds through the passage of the Weeks bill, it will relieve the National Association of an enormous amount of expenditure of money and labor, and permit the Association to follow more closely its legitimate line of work, namely, education of the public regarding the value of birds.

The Association introduced on the first day of the legislative session in New York

state, a bill in the Assembly by the Honorable James A. Francis. The object of the bill is to amend Sections 98 and 241 of the Forest, Fish and Game Law of New York state, by making them cover the plumage of wild birds "irrespective of where the said plumage comes from."

This is, undoubtedly, the most important piece of legislation ever attempted by the National Association in the state of New York, and it is very desirable; in fact, it is absolutely necessary in order that adequate protection may be given to the non-game birds of the state. The present law only covers birds killed within the state of New York, and a successful suit cannot be maintained against the plumage of wild birds brought into the state from other places.

A few years ago, the same condition obtained in respect to the flesh of game birds and animals, and the state authorities found it impossible to give proper protection to local game birds and animals while game could be brought in from other states and countries. The state law was corrected in this respect, and since the passage of the amendment there has been no difficulty in giving complete protection to game. The constitutionality of this question has been absolutely settled, not only by the Court of Appeals of the state of New York, but by the Supreme Court of the United States.

The National Association and the subcommittee on birds of the National Conservation Commission are simply asking the Legislature of the state of New York, through Assembly bill No. 65, to place plumage in the same advantageous position that the flesh of game birds and animals now occupies. Until this weakness in the New York law is corrected, it will be impossible for satisfactory protection

to be given to the non-game birds of the state.

In view of this fact, the readers of BIRD-LORE who are resident in the state of New York are very earnestly requested to take every proper means in their power to influence their Senators and Assemblymen to favorably consider Assembly Bill No. 65. This can be done by letters, but it is far better to do it by personal interviews with their representatives.—W. D.

SOUTH DAKOTA.—At our recent session of the Legislature, we secured the enactment of a general game law, providing for a salaried state warden at \$1,500 a year, and a warden for every county at \$50 a month. We put a tax of \$1 on every gun, and declared all dogs, guns, boats, and equipment illegally used to be contraband. We made a closed season for Prairie Chicken, Grouse and Woodcock for two years, and decreased the size of the bag when shooting is again permitted.

The open season, two years hence, will be ten days later than heretofore, and spring shooting of aquatic fowl is practically prohibited. We have even compelled owners of hunting dogs to keep them in during the spring time.

Altogether, we are pleased with the measure, as we now have the means for the enforcement of a very satisfactory law.—CHARLES E. HOLMES, *President State Audubon Society*.

MEXICO.—I went to Little Rock, Ark., where I drafted a bill for the establishment of a State Game Commission, had conferences with members of the State Game Protective Association, addressed a joint session of the Legislature, and gathered much information regarding game conditions in the state. I then went to Austin, Texas, and was associated there two days with Captain Davis, Secretary of the Texas Audubon Society, meeting the officers of the State Fish and Game Commission, as well as many other persons, and I gave a stereoptican lecture in the chapel of the State University. At San Antonio, I attended a dinner given

by the Scientific Society of that city, and also gave a night lecture. Through friends of Captain Davis, I got letters of introduction to people in Mexico City, and, learning something of the terrific slaughter of game in that republic, and becoming acquainted with the fact that there were no restrictive measures whatever on the killing of wild birds and animals, I felt that it was not wise to miss the opportunity of seeing if something could be done for game protection there.

I visited Monterey and Mexico City. In the latter place, after some days delay, I secured an interview with President Diaz, and laid before him a plan for organizing a national movement for game protection in Mexico, this to be followed up with restrictive measures on the killing of birds and game, the work to be supported by a hunters' license. President Diaz expressed himself as much interested in the project, and named his own son, Porfirio Diaz, Ejo. (Jr.), to organize the work in Mexico. Porfirio Diaz is about thirty-six years old, and a man of wide political, financial and personal influence in the Republic. He is also a sportsman on an elaborate scale, and all the people with whom I talked said he was the best possible man in the Republic to take up this work. The American tourists and American residents of Mexico whom I met all congratulated me heartily on the encouragement which I received from the President and his son.

I was the recipient of a number of courtesies from Porfirio Diaz, Ejo. (Jr.). The President asked me to at once prepare a suggested outline for work in Mexico, to send copies of by-laws for National Bird and Game Protective Societies, all the available literature on the importance of birds to agriculture, and such other information as would be of value to him in the movement. This I am now preparing.—T. G. P.

The Cat Question

EDITORS OF BIRD-LORE:—In BIRD-LORE for January-February, 1909, I have

just read two letters which treat of the 'Cat versus Bird' question, and I notice that the person who seems to have suffered most from the depredations of puss is the least vindictive against cats; for, although the letter calls them 'blood-thirsty creatures,' it only advises "in some way curtailing their liberty;" while the previous writer is surprised because nothing he could say or do about his Bluebirds would console his neighbor for her cat, murdered in their behalf. May not the cat have been, for a long time, the pet of its owner, and, without being unreasonable, might not she well consider that its constant companionship, summer and winter, for years, made it of more value than the pets of a season?

Do not think I am advocating letting stray cats, owned by no one, forage on birds; but I do think that bird-protectors should be careful not to kill pet cats, unless, in extreme cases, where the owners are warned of the harm they do and yet take no pains to restrain them.

In favor of puss, may I cite the case of our cat, a handsome, black animal, whose beauty and intelligence have made him the delight of our household for years? In part, on account of the birds, we have feared to take him to our summer home, and left him in the city with the caretaker; but, last year, he was at Magnolia from the end of June to the end of October, walking out every day among the bushes and trees. Once only was he seen with a bird, and there is no reason to believe that he caught that; it may have died from eating poisoned berries, for the whole place was heavily sprayed with arsenate of lead. Kitty's persistence in bringing this bird into the house convinced us that had he caught others, we should have seen them.—CORA H. CLARKE. *Boston, Mass.*

Clarke University, Worcester, Mass.

February 10, 1909.

EDITORS OF BIRD-LORE: In response to your request for data regarding destruction of birds by cats in last BIRD-LORE, I beg to place on record the fol-

lowing. The question is often asked whether cats seriously interfere with game birds.

Before moving to my new place last spring (but while the birds were in charge of a good man who did live on the place), I had four Ruffed Grouse and six Bobwhites killed by cats. This was all done by the cats reaching through inch-mesh poultry wire. The birds were frightened against the wire and generally the head was pulled off. As soon as the trouble began, numerous traps were set, and, thinking it the work of Owls, a number were placed on perches and on the corners of the cages. Nothing but cats were caught and with their disappearance all disturbance ceased.

Later in the summer, a Bobwhite cock began brooding a nest of sixteen eggs. The nest was well concealed, and about three feet from the side of a cage forty feet square. Cats frightened him off four times, and each time I took the eggs and slipped them under a brooding bantam hen before they had time to chill. He finally brought off fifteen chicks. When the cock and his mate had reared the brood to about three weeks of age, the dog I keep, mainly for the purpose of warning cats from the premises, took a vacation for a few days. During this time a cat disturbed the brood on a cold night, and only three of the chicks were found alive next morning. The brood was in a cage 6 x 12 feet, inch-mesh wire, with a strip of cloth 18 inches wide around the bottom, and they were concealed under a dense pile of green spruce boughs.

The above is only a fraction of my experience the past season. We do not need to look beyond the uncontrolled cat to account for widespread extermination of game birds.

C. F. HODGE, Worcester, Mass.

Correction

In the February number of BIRD-LORE, it was stated that the contribution to the Willow Island fund from Mrs. Phillips was 50 cents; it should have been \$5.

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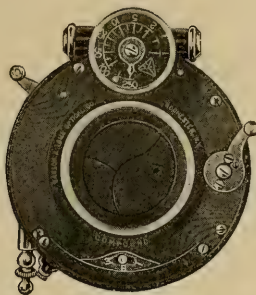
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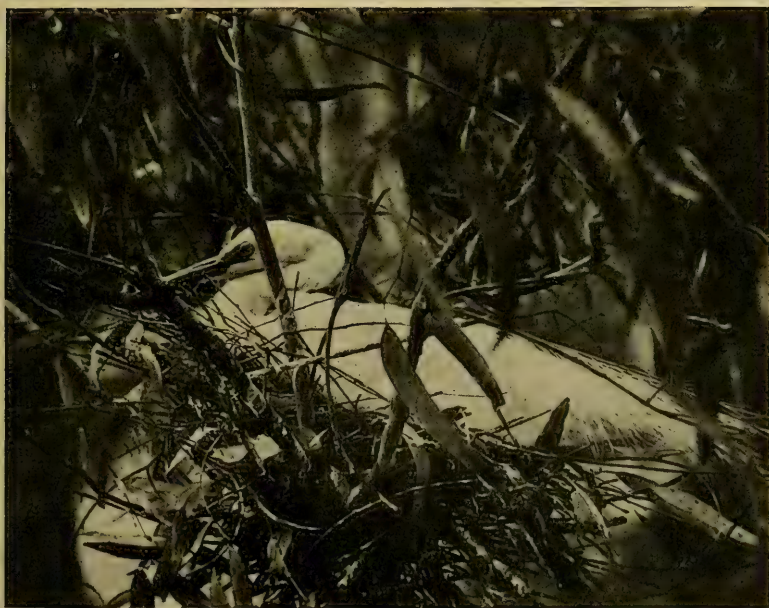
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May - June, 1909

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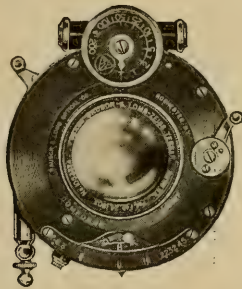
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BROODING EGRET—THE DORSAL TRAIN OF NUPTIAL PLUMES ARE
HANGING OVER THE TAIL FEATHERS

Photographed by A. H. E. Mattingley

THE HORRORS OF THE PLUME TRADE

By WILLIAM DUTCHER

The National Association of Audubon Societies

SPECIAL LEAFLET NO. 21

Ignoring the economic value of wild birds, which alone should be a sufficient reason for their preservation, there is another reason why none should be killed for millinery ornaments. The horrors attending the collection of plumes of Herons is beyond the powers of language to describe, and can best be shown pictorially. Much has been written on the subject in the past, and it seems almost impossible that any woman who reads current bird literature or the public press can fail to know the extreme cruelty attending the traffic in wild-bird plumage. The American women who are still willing to wear the plumes of the white Herons sometimes offer as an excuse that they are not taken from native Herons; but it is immaterial whether the birds were killed in America or in some other part of the world. The same cruelty is practiced in the Eastern Hemisphere as in the Western. The paltry price in money that is paid for the plumes is not to be compared to the price paid in blood and suffering.

Women must remember:

That White Herons wear the coveted plumes only during the breeding season.

The Horrors of the Plume Trade

That the parent birds must be shot in order to obtain the plumes.

That the young birds in the nests must starve, in consequence of the death of the parents.

That all statements that the plumes are manufactured or are gathered after being molted by the adult birds are false. Human skill cannot reproduce a feather, and, after the breeding season, all Herons' plumes are worn and ragged, and are, therefore, unfit for use.



THE COST OF A PLUME. THE PICTURE TELLS ITS OWN TALE

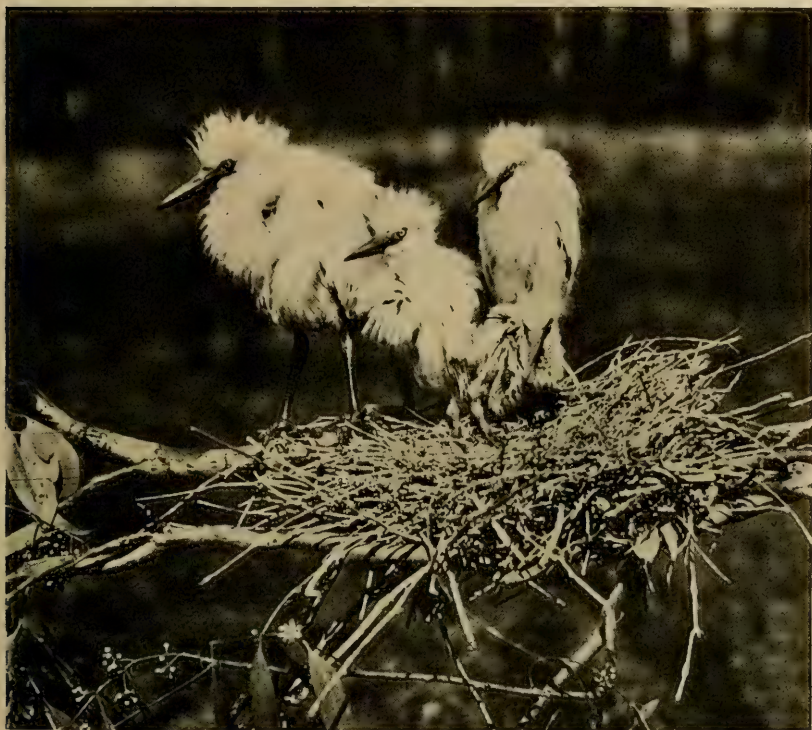
Photographed by A. H. E. Mattingley

Mr. A. H. E. Mattingley, of Melbourne, graphically describes the horrors he witnessed at a Heron rookery, in New South Wales, which had been raided by plume-hunters, and verified his statements by the camera.*

"Notwithstanding the extreme heat and the myriads of mosquitos, I determined to revisit the locality during my Christmas holidays, in order to obtain one picture only,—namely, that of a White Crane, or Egret, feeding its young. When near the place, I could see some large patches of white, either floating in the water, or reclining on the fallen trees in the vicinity of the Egret's rookery.

*Reprinted, by permission, from 'The Emu,' the official organ of the Australasian Ornithologists' Union.

This set me speculating as to the cause of this unusual sight. As I drew nearer, what a spectacle met my gaze,—a sight that made my blood fairly boil with indignation. There, strewn on the floating water-weed, and also on adjacent logs, were at least fifty carcasses of large White and smaller Plumed Egrets,—nearly one-third of the rookery, perhaps more,—the birds having been shot off their nests containing young. What a holocaust! Plundered for their plumes. What a monument of human callousness! There were fifty birds ruthlessly



FATHERLESS AND MOTHERLESS—NO ONE TO FEED THEM—GROWING WEAKER—ONE ALREADY DEAD FROM STARVATION AND EXPOSURE

Photographed by A. H. E. Mattingley

destroyed, besides their young (about 200) left to die of starvation! This last fact was betokened by at least seventy carcasses of the nestlings, which had become so weak that their legs had refused to support them, and they had fallen from the nests into the water below, and had been miserably drowned; while, in the trees above, the remainder of the parentless young ones could be seen staggering in the nests, some of them falling with a splash into the water, as their waning strength left them too exhausted to hold up any longer, while others simply stretched themselves out on the nest and so expired. Others, again, were seen trying in vain to attract the attention of passing Egrets, which were

flying with food in their bills to feed their own young, and it was a pitiful sight indeed to see these starvelings with outstretched necks and gaping bills imploring the passing birds to feed them. What a sickening sight! How my heart ached for them! How could any one but a cold-blooded, callous monster destroy in this wholesale manner such beautiful birds,—the embodiment of all that is pure, graceful and good?

"In one tree at the Heronry the nests of the Plumed Egret (*Mesophoyx plumifera*) and Egret (*Herodias timoriensis*) were seen. In another large tree a photo was taken of two young Plumed Egrets and one young Large Egret together in the same nest. These three birds were the sole survivors of several broods of both species which had nested together in the same tree. They had evidently sought one another's company, because all the balance of the nestlings had expired through lack of nourishment, their parents having been shot by the plume-hunters, or, rather, 'plume-plunderers.'"

A like gruesome story is given by Mr. William L. Finley, Northwest Field Agent of the National Association of Audubon Societies, after he had explored the region about Lake Malheur, Oregon, where formerly thousands of White Herons bred, but now none are to be found,—all absolutely exterminated by plume-hunters.

Every aigrette we see, whether adorning (spare the mark) a woman's head, or for sale in the shops, has been torn from the body of a dead Heron. This vandalism will not cease while the reward of gold lasts, unless the heart of fashion changes or drastic laws are enacted forbidding the sale of Herons' plumes irrespective of from what part of the world the plumes are taken.

This unholy trade must be stamped out.



AWAITING THE END—TOO WEAK TO STAND OR CRY FOR FOOD—
DEATH WILL BE A HAPPY RELEASE

Photographed by A. H. E. Mattingley



1. BLACK-CAPPED VIREO
2. HUTTON'S VIREO

3. WHITE-EYED VIREO
4. LEAST VIREO

5. BELL'S VIREO

(ONE-HALF NATURAL SIZE)

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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XI

MAY—JUNE, 1909

No. 3

A Bird Photographer's Outfit

By A. C. BENT

With photographs by the author

THERE can be no doubt that the modern sport of camera-hunting is rapidly increasing in favor and gradually replacing the more destructive, though no more exciting, sport of killing game with rifle or gun. A glance at the pages of any up-to-date magazine, devoted to outdoor amusements, will show that bird and animal photography has taken a prominent place among the field sports of the day. Though my early training and my field experience in the best shooting-grounds in the country have made me an ardent sportsman, I shall in future leave the killing of game to others,—to those who have not tasted of the pleasures of bird photography. It is my cameras now that absorb my attention; there are seven in the family at present—all different—and a very interesting family they are.

But no such formidable battery as this is necessary or even desirable, nor is any very expensive outfit required to begin work as a bird photographer. The cost of the modern high-speed lenses and of some of the modern types of cameras is prohibitive to the average man, and many are discouraged on the score of expense alone. Naturally, as one progresses and grows more ambitious to achieve marvelous results, there is a constant temptation to spend money on improved apparatus; but this is true of any sport or hobby, and the enthusiast should always regard money spent on his hobby as an investment rather than an expenditure.

I began twelve years ago with an investment of \$25 (or so) in a Cycle Poco camera, with which I was able to do some very satisfactory work, and which is still the most important camera in my outfit. Since then I have taken many interesting trips, have learned the use of more improved apparatus, and have studied the interesting problems of photographing the wildest birds in their native haunts,—a rich field of fascinating possibilities.

While I do not claim to own an ideal outfit, experience has taught me something in regard to it which may be of use to beginners. A fairly complete outfit, which should equip the bird photographer for nearly all classes of work, should

consist of three cameras, which I shall attempt to describe. All three should be of the 4 x 5 size, which gives satisfactory pictures, well adapted for enlarging or reducing to lantern slides. Any attempt to use the larger sizes for field work will but lead to labor and sorrow; for, unless the photographer is endowed with the strength of a Hercules, he will find it a discouraging handicap to load himself down with large cameras and a supply of heavy plates. His strength



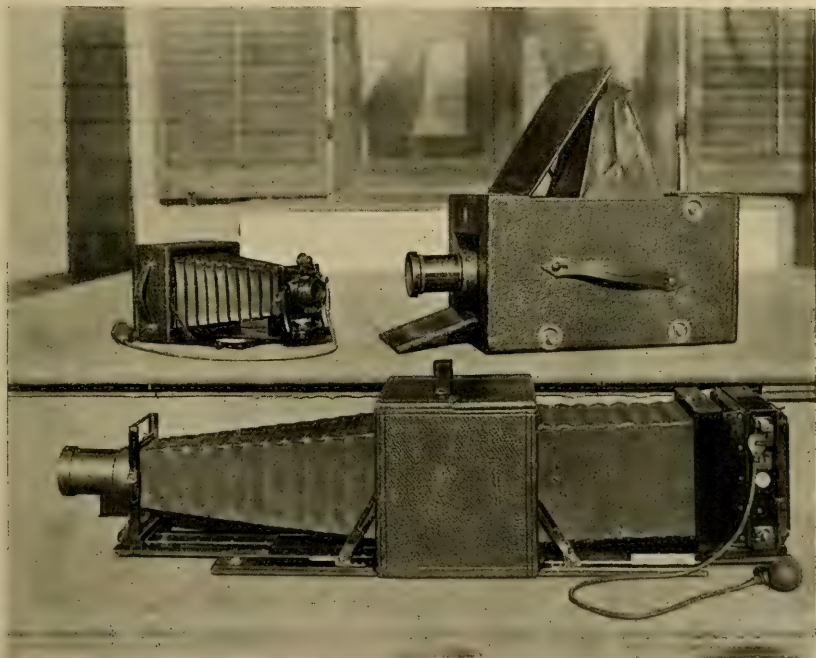
METHOD OF ATTACHING A SMALL CAMERA TO A LIMB

will be taxed to the utmost, anyway, while struggling through the tangles of a tropical forest, wading through almost impassable morasses or tramping for miles over hot, yielding sands, where every additional pound will count.

The first camera to buy, which will probably prove the most useful of all, and which I should unhesitatingly select if I could have but one, should be a small, light camera of the compact, folding type; but it should have sufficient length of bellows to use the single combinations of a convertible lens,—at least seventeen inches. The Telephoto 'Cycle Poco,' the 'Pony Premo,' the 'Cycle Graphic,' and the 'Century Grand,' are good examples of this type, but there are many others just as good. It should be equipped with as good a lens as the buyer's purse will allow; though the regular long focus symmetrical lenses that come with these cameras are good enough for any ordinary work. The shutter should be as noiseless as possible,—though none of them are absolutely so,—and should have a finger release, as well as a bulb release. An automatic shutter is worse than useless for bird photography, as it is often necessary to release

the shutter by means of a long thread from a distant point. Neither a thread nor a bulb and tube will work with certainty at long range, and it is impossible to tell whether an automatic shutter has been released or not.

If this is to be the only camera used, it should be fitted with a focal-plane shutter also, which is an absolute necessity for photographing flying birds, as this requires an exposure of from one four-hundredth to one eight-hundredth of a second, according to the speed at which the bird's wings are moving. More fully exposed plates can be obtained at high speed with the focal-plane shutter than with any other, because the lens is always wide open, no time being lost in opening and closing the shutter, and because the adjustable slit in the curtain traverses from top to bottom of the plate, exposing all portions of the plate uniformly. In order to use this camera for tree work, special apparatus is needed for attaching the camera to the trunk or branches. I have a little device consisting of a brass base which can be fastened to the tree by an ordinary shawl-



SHORT-FOCUS, REFLECTING, AND LONG-FOCUS CAMERAS

strap; the camera is then secured to the base by a double ball-and-socket joint, also of brass, one member of which screws into the base and one into the camera, thus enabling the camera to be pointed in any direction. This ball-and-socket joint can also be used conveniently in the tripod top for pointing the camera downward or upward without adjusting the legs. The whole apparatus folds up compactly with the tripod, the shawl-strap serving as a handle. Another

tree apparatus, which some photographers prefer, consist of an L-shaped piece of iron with a gimlet point at one end, which is screwed into the tree, the camera being attached to the other end by a ball-and-socket bicycle clamp. This has the advantage of being somewhat firmer, but it is not so good for use on small branches or bushes.

When supplied with such a camera as this, the beginner would be fairly well equipped for all-round work at bird photography, and he could start out with reasonable assurance of success in all but special cases. The long bellows would enable him to take fairly large pictures of distant birds by using the single combinations of his lens, and the focal-plane shutter would equip him for flight pictures. But, if the bird photographer can afford more than one camera, it would be better to omit the focal-plane shutter in this case and take his flight pictures with another camera. The aim in this little camera should be to combine lightness, compactness and simplicity, for convenience in carrying and working in difficult situations; all unnecessary complications and machinery should be left off, as they are liable to get out of order or lead to disastrous errors. The experienced or professional bird photographer would find this little camera the most useful instrument in his outfit. Its small size and light weight make it convenient and easy to carry on long, hard trips on foot; it can be strapped on the frame of a bicycle between the rider's knees, or carried in a hunting-coat pocket while climbing lofty trees. I have climbed the tallest and most difficult trees with my little 'Poco' camera in my pocket, while my companion, who was lugging a long-focus 'Premo' had to be contented with pictures from the ground, not daring to make the climb with his bulky instrument.

The bird photographer's outfit cannot be considered complete without a reflecting hand camera, for quick snapshots at flying birds, and for use in the many difficult situations where no other type of camera can be used. The 'Graflex' is probably the finest and best-made camera of this class on the market, but the high price at which it is sold puts it beyond the reach of the average man's pocketbook, and its great weight makes it impracticable for field use except under the most favorable circumstances. I consider the 'Reflex,' which is more reasonable in price, the most practical camera of this class, and a most valuable instrument for bird photography. The focal-plane shutter, with adjustable slit, gives it a wide range of speeds up to one one-thousandth of a second, adapting it for use on the swiftest-flying birds, as well as for slow snapshots at stationary objects. By looking into the hood, the image can be clearly seen reflected on the ground glass, full size and right side up, enabling the photographer to find and focus sharply upon the moving object up to the instant of exposure, thus insuring accurate results. The ease and rapidity with which the Reflex camera can be operated enables the photographer to take advantage of fleeting opportunities, which would be lost without it. I have seen a fine series of pictures taken of some shy bird brooding or hovering for an instant over its young, alighting temporarily on a nearby perch, moving restlessly about at short range, or

flying past unexpectedly near, when not a single photograph could have been taken with an ordinary camera. It is often useful, too, in photographing nests and young in shaky tree tops, where there is no opportunity to attach and focus an ordinary camera. Most of our best work on the precipitous cliffs of Bird Rock was done with Reflex cameras, while dangling in the crate at the end of a long rope, or climbing the ladders. The long, narrow picture of Kittiwake on their nests, in my recent paper in BIRD-LORE, was taken from one of the ladders, and is especially interesting as being the last one ever taken with this



TWO PHOTOGRAPHS OF AN OSPREY AND ITS NEST FROM A DISTANCE OF
THIRTY FEET

The smaller with a 6-inch focus lens; the larger with a 26-inch focus lens

unlucky camera; for a few moments afterward the strap broke, and down went the camera, bounding over the rocks. I picked it up at the base of the cliff, one hundred feet below, a hopeless wreck. For a wonder, the valuable 8 x 10 lens was picked up twenty feet away uninjured, and, what was still more remarkable, this plate was still in the holder, and not even cracked. Fortunately, I had two cameras left, so that I could continue my work.

The Reflex camera should have two lenses fitted to interchangeable sockets,—one small lens, adapted to the size of the camera, for general views, and one large lens, of as long focus as it will take, for bird pictures. It should be of the long-focus type, if possible, so that the single combination of a long lens can be used; but, unfortunately, the 4 x 5 size is not made in the long-focus type. The

5 x 7 Reflex is so bulky and heavy that it is a burden to carry it on long, hard tramps, so that I prefer to carry a 4 x 5 Reflex, using the doublet of an 8 x 10 lens in it. This is a handy instrument to carry, but, of course, some of the pictures have to be enlarged. Even the long-focus 5 x 7 Reflex has not bellows enough to use the single combination of an 8 x 10 lens. Moreover, pictures taken at anything faster than one five-hundredth of a second with the single combination are sure to be under-exposed; therefore, I prefer to use the doublet and enlarge the negative.

When I want to obtain large images of birds at a distance, I prefer to use a long-focus 4 x 5 Premo camera. It is rather a bulky instrument, but it has the longest bellows of any camera of its size; mine has twenty-eight inches, and I frequently need the whole of it when working with the single combination of an 8 x 10 lens. The two Osprey pictures—both contact prints—serve to illustrate the advantage of this camera. Both pictures were taken from the same point, the smaller one with a 4 x 5 Poco, and the larger with the long-focus Premo and the front combination of the large lens, the exposure being one four-hundredth of a second.

This camera is equipped with a Thornton-Pickhard focal-plane shutter and has all the modern improvements, but its use is restricted to short trips or places where it can be carried in a boat or a wagon. Even then, it has so much complicated machinery about it that I have to handle it very carefully, and am very liable to make mistakes. I have done some good work with it, and have also made some discouraging failures.

But the bird photographer must expect many failures—more failures than successes at first. On my second trip to Florida, every picture I took with this camera was hopelessly fogged, because the camera-maker failed to fit the focal-plane shutter properly; I had the work done by a reliable firm, but did not have time to test it before I started. It was a costly but impressive lesson.

So far, I have not said much about lenses, and perhaps I had better not, as most photographers will not agree with me. I am not a strong believer in the value, to the bird photographer at least, of the high-priced, much-advertised, and, so-called, high-speed lenses. The regular lenses that come with the cameras, or, at most, the medium-grade lenses, are good enough and fast enough for the bird photographer's requirements. The high-priced lenses may be a shade quicker or work at a little larger aperture, but they are not worth the difference in price. The small camera should have a 4 x 5 lens for working at short range, but the other cameras should have as large lenses as they will take. The telephoto attachments, or telescope lenses, are not worth bothering with, as they will not work satisfactorily except with the highest grade lenses,—and even then it is a very difficult matter to focus them properly. If there is the slightest vibration from wind or other cause, the results are disastrous; moreover, it is very seldom that a bird will wait long enough to set one up and focus it. I prefer to take my negatives in some other way and enlarge them.

There should be a plentiful supply of plate-holders, as many as can be carried. I carry twenty-six double holders, so that I can expose fifty-two plates without reloading; I have seldom had occasion to expose as many plates as this in one day, though it is easy to do so in any of the great breeding colonies, such as Bird Rock, Pelican Island, or the Florida rookeries, where a hundred plates would be none too many, and where birds are flying by in a steady stream or constantly offering tempting opportunities. It would be well to have all the plate-holders interchangeable among the three cameras, for obvious reasons, and, as the Premo plate-holders will also fit the Reflex cameras, the cameras might be selected with this end in view.

The choice of plates deserves some consideration, though any good brand of rapid plate will do. The isochromatic or orthochromatic brands are preferable, as they give true color values and bring out the fine markings in the bird's plumage. I have adopted, and can strongly recommend, the Kodoid plates, made by the Eastman Company. They possess four very decided advantages not combined in any glass plate: (1) They are light and easy to carry in a trunk or in the field. (2) They are practically unbreakable, thus saving many hours of trouble and worry. (3) They are orthochromatic, even without a color screen. (4) They are non-halation, a useful quality not usually possessed by fast plates. They are said to be slower than the rapid glass plates, but I have found them fully equal to the fastest work.

The latest addition to my camera outfit, and a very important one, is a camera trunk. It is a stout box, about the size and shape of a steamer trunk, made of pine, reinforced with strips of ash, and bound at the corners with steel. Internally, it has six padded compartments, one for each of the three cameras, described above, one for plate holders, and two for plates and small paraphernalia. Everything in it fits accurately into its proper place, and everything is ready for instant use. Its advantages are obvious, and it is certainly a great improvement over the ordinary trunk, where apparatus cannot be properly packed, and where everything is in chaos before the end of a three-weeks' cruise. The value of this trunk was strongly emphasized on our trip to Bird Rock in an open boat. While landing in the surf, the sea broke over the stern, filling the boat half-full of water and hopelessly drenching our luggage; my companions' apparatus barely escaped utter ruin, and many of his plate-holders were rendered useless, while not a drop of water reached the contents of my trunk.

So much for the outfit; the rest depends upon the photographer, and, if he would succeed, he must be well supplied with unlimited patience and perseverance. He must have plenty of energy, and be endowed with a good constitution to withstand hardship and exposure, for photographing birds in their native wilderness is not child's play. And, above all, he must be well supplied with plates, and use them freely. One seldom regrets having made an exposure, but often wishes he had taken just a few more. The cost of a few plates is not to be compared with the value of the golden opportunity, which may never occur again.

Two Interesting Photographs from Alberta

By SIDNEY S. S. STANSELL, Stony Plain, Alberta

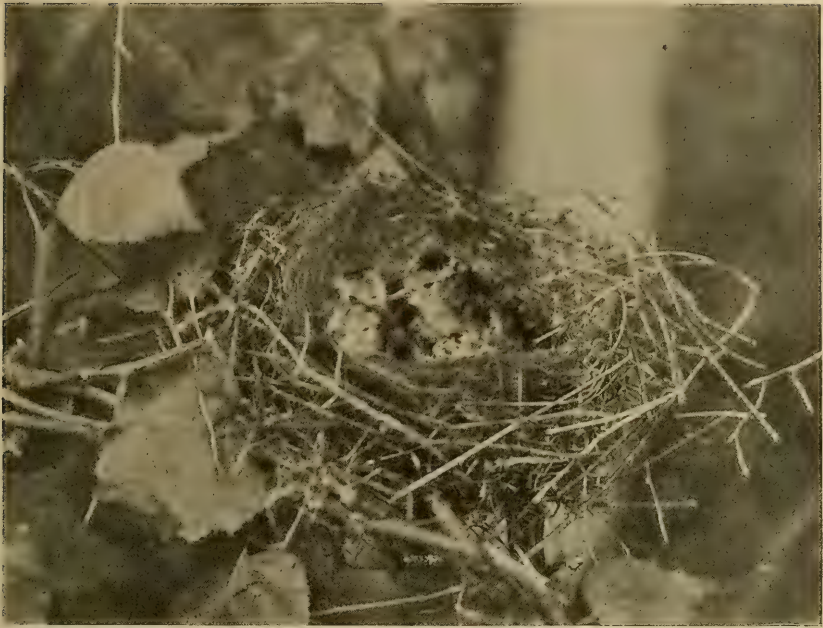
ON June 19, 1908, I started on a short tramp through the deep woods to a small lake where I had been told that a pair of Loons were breeding. This particular lake has a hard bottom, which is something for a lake to boast of in this locality, as the mud and muck are usually much deeper than the water. Being skirted with willows, poplars and spruce, it made an ideal nesting-place for the bird of my quest.

On the western bank, under some outspreading willows, the nest was found in about a foot of water, and close against a small tree that had fallen into the lake. It was composed of grasses, sticks and decayed vegetation, and lined, or partially so, with strips of spruce bark. The structure was quite flat, and contained two large, dark-colored eggs with blackish spots on them.

Just as I was about to photograph the nest and eggs, it began to rain, so I retired to the shelter of a large spruce tree nearby. In a short time, the shower was over, and I proceeded to photograph the nest and eggs. This done, I constructed a blind of some of the willows and saskatoon bushes, and placed my camera in it, set the diaphragm at 6.8, the shutter at one-half second, attached a stout linen thread to the shutter, ran it back about thirty feet, then placed my plate-holder in position, drew the slide, covered the camera with the focusing cloth, then started around the lake to the place where a friend was erecting a cabin. On the way, I observed six or seven old nests, but not a single new one.



LOON ON NEST



THREE YOUNG AND ONE EGG OF THE SOLITARY SANDPIPER IN THE
NEST OF A ROBIN

and began to think that I was not to find any more birds to photograph that day. Finally, I reached the cabin, and was sitting on a fallen tree, resting a few moments, when I heard a peculiar noise in a birch tree at the edge of the lake nearby. On going down to the tree, I could see nothing of the bird that was making the noise; so I tossed a small stick up into the branches, and out flew—what do you suppose? A Solitary Sandpiper (*Helodromas solitarius*). My heart nearly leaped out of my mouth. I had *certainly* found the Solitary's nest at last. It seemed to me as though I should never get up that thirty-five feet; never did climbing seem so slow, although I had good limbs to hang on to. At last, after much slipping and puffing, I reached the nest, a somewhat dilapidated Robin's nest, and there found three newly hatched Sandpipers, and one partly broken, addled egg.

Returning for my camera, I found the Loon sitting very quietly on her two eggs, and spread out enough to cover a dozen. I advanced very cautiously to where my thread was fastened, and gave it a steady pull, then started down to the blind for the camera. When about half way down, the Loon spied me and struck for the water with breakneck speed, its wings flopping and feet paddling.

I placed the slide in its proper place, folded up the camera, and started back to my last find. After much discussion, we decided that, as the young Sandpipers were ready to leave the nest, it would be best to bring it down to photograph it. Indeed, one bird had already gone, but was found close by.

After securing our photograph, we placed the nest on the ground, and the mother bird came and called the young to her.

A Tragedy of Migration

By F. M. BENNETT, Commander, United States Navy

THE night of April 14, 1909, the region of the Florida Keys was the scene of a violent thunderstorm of several hours' duration, with lightning, heavy rain, and high winds, blowing in squalls from the southwest. The morning brought fine weather, and I observed at Key West that the town was full of birds of several species, to be referred to by name a little later. The visitation attracted the attention of every one, not only because of the great numbers and brilliant plumage of the refugees, but, also, because land birds, even during the migration seasons, are rare in Key West; even the persistent English Sparrow has not yet found the place.

April 20, six days after the storm, I left Key West to inspect some lighthouses, going first to Sand Key, the big reef light only a few miles from Key West, and then sixty miles to the westward to Tortugas. At Sand Key the light-keepers told me of many birds killed by striking their light the night of the storm, and I saw the bodies of a few that they had not disposed of; but it was not until I arrived at Tortugas that I realized fully the magnitude of the migration wave that had been broken by the force of the storm. The main light there, known as Dry Tortugas, stands on Loggerhead Key and is 150 feet high, visible eighteen miles from a ship; but to birds higher in the air than the height of the eye on shipboard it must be visible much farther, and this great light had acted as a magnet and drawn to itself countless thousands of birds of many kinds, overpowered by the storm and forced to seek asylum. The keeper of that light has been more than twenty years in the lighthouse service, and for several years, when stationed on Alligator Reef, he collected bird data for the United States Biological Survey; he is therefore familiar with the subject.

Nevertheless, as soon as I landed on Loggerhead Key this keeper began talking about the birds that had been on his island, saying over and over again that he had never seen or heard of anything like it, and, after investigation, I believe that he was right. Very few persons can possibly ever have seen anything like what happened on that little islet the night of the storm and the few days following. The bad weather, with wind and rain, began soon after sunset; but at 10 p. m., when the keeper went on watch, there had not been a bird seen about the light. By midnight, a few had struck the plate-glass panes of the lantern, and at 2 A. M., when an assistant relieved the keeper, they had become numerous. This assistant told me that from 2 o'clock until dawn they came in such masses that he actually could not see out through the glass panes! He said that they were all on the lee side of the lantern, away from the wind, and did not fly against the glass at full speed, but rather fluttered and beat against it, bruising and wounding themselves and each other, and thus causing death to many. Occasionally, one coming at higher speed would strike hard enough to kill itself on the spot.

With the first light of morning, they forsook the lighthouse and took to the ground, bushes and trees. At that time, the ground at the base of the tower was thickly strewn with dead birds, as were also the balconies around the lantern and watch-room at the top of the tower. The keeper said that they collected thousands and threw them into the sea, but, by close questioning, I got the estimates so much reduced that I hope hundreds may be substituted for thousands; though the loss of life evidently had been great, and, at the time of my visit, there were still numbers of the dead scattered all over the island. These probably had died after the storm was over, unable to recover from exhaustion or from injuries received.

If the great number of dead birds presented a notable sight, what may be said of the living? The lighthouse keeper said that there were millions of them. I compared his narrative with those of the assistant keepers, and, aided by my own observation of the great numbers still there six days after the disaster, I feel sure that they may truly be measured in units of tens of thousands. The keepers agreed that they were so numerous that it was difficult to walk anywhere outdoors without stepping upon them, and that they were so tame that the children caught them by simply picking them up off the ground. Exhaustion and bewilderment, of course, played a part in this tameness, but those still there displayed an absence of fear that did not seem possible. When it is considered that this great multitude included several of the most brightly colored species of North America, and that they were all in their fresh spring plumage, it may be imagined what a wonderful and glorious spectacle they presented.

The lightkeeper told me that nearly all had left, but when I saw what remained I was fairly astonished, for they were so numerous that they would have excited surprise anywhere. The same species that I had seen in Key West were here present in much greater numbers, and there were several species here that I had not seen in Key West. In order of numbers, I would list them about as follows: Summer Tanager, Indigo Bunting, Ovenbird, Orchard Oriole, Scarlet Tanager, Black-throated Blue Warbler, Hooded Warbler, Ruby-throated Humming-bird, Painted Bunting or Nonpareil, Northern Yellow-throat, King-bird, Cape May Warbler, Blue Grosbeak, Warbling Vireo, and Worm-eating Warbler. The five species first named, although only remnants of great flocks were present in hundreds; the others in dozens, and all very fearless except the Blue Grosbeaks, which, for some unaccountable reason, would fly if they saw my glasses leveled at them even a hundred feet or more away.

In this instance, birds of a feather did not make a point of flocking together, common misfortune having apparently united them into a harmonious community, and it was a beautiful sight to see such numbers of differently colored birds mixed closely together. They were well scattered over the island, which is about three-fourths of a mile long, but were most numerous near the dwelling-houses of the light-keepers, where I approached the multi-colored groups closely without causing alarm; the Ovenbirds were particularly tame, walking all about me in

their dainty way as unconcerned as young chickens in a barnyard. The Warblers were not associated so much with the larger birds, but kept more to themselves, separated perhaps by their habit of feeding mostly in trees. They were most numerous on Garden Key, about three miles from Loggerhead, where inside Fort Jefferson there are more and larger trees than Loggerhead affords. The gathering of birds at Fort Jefferson had been similar to that already described; but, as the light there is of the fourth order, and not very high, above the bastion of the fort, it had not attracted so many. The great first-order light on Loggerhead had evidently caught the attention of the flying multitudes and beckoned them to a landing-spot, when trouble overtook them.

Males and females were in about equal numbers among them, the Indigo Buntings furnishing the only exception. Hundreds of the brightly plumaged males of this species were present, but I saw only three females. With the exception of the Orchard Orioles, there was no singing on the part of these birds. The male Orioles were joyously vocal, and, from the additional circumstance that they were fighting among themselves, I suspect that mating was in progress. There were among them a considerable number of young males of a general yellowish hue, with black throats, and against these the animosity of the older males seemed to be particularly directed. Some of these young males had the plumage more matured, black on neck and shoulders, and brick red underneath being noticeably developed.

Nearly all the birds observed were active and strong, and it was not apparent why they had not resumed their journey; some, however, moved about painfully, showing that they had not recovered from their rough experience, and a good many had feathers missing or badly awry. Among the Indigo Birds, especially, I noticed a number—at least two dozen—that had lost all their tail feathers and could fly only short distances, like young birds. The keeper told me that the watch-room had been recently painted and was not thoroughly dry on the outside, and that the morning after the storm it was literally plastered over with feathers of all colors.

The birds already mentioned are those that were sufficiently numerous to prove that large numbers of their species were on the wing that night, and were caught in the storm. Among the few dead remaining at Sand Key when I went there, I identified a single specimen each of the Purple Gallinule, Blackpoll Warbler and Prairie Warbler, which shows that at least some members of these species were also abroad at that unfortunate time. I saw one living Prairie Warbler at Tortugas, and three Yellow-billed Cuckoos at the same place. At Key West, April 16, I identified positively a single male Yellow Warbler (Summer Yellowbird), an unusual observation, as I believe the bird is rarely seen in Florida. Several Palm Warblers and Black and White Warblers were seen with the delayed migrants at both Key West and Tortugas, but I do not believe they came with them, because I saw none dead or injured, and because I had seen them in small numbers at both places at intervals before. A few Palm

Warblers were seen at Key West frequently all during the winter and spring, and these completely disappeared with the last of the refugees, which was about April 21.

Conclusions in review of the foregoing are that on the night of April 14, 1909, there was an enormous flight of birds of the species above named, making passage from Cuba or Yucatan toward the coast of Florida; that a sudden storm checked their advance and forced them to seek sanctuary, which they did by converging upon such lights as they could see; that hundreds, and, possibly, thousands, met death from exhaustion, or from injuries received in landing at each place where they sought shelter, and that the total number thus destroyed was small compared with the numbers that survived and continued their journey later. Of the whole membership of that great wave of migration on a single night it is impossible to form an opinion; but, from what I saw and heard at Key West, Sand Key and Tortugas, it is not extravagant to say that the air in this region must have been full of birds, and that their numbers may fairly be counted in tens of thousands.

At American Shoal lighthouse, seventeen miles eastward from Key West, not a bird was seen the night of the storm or the day after. The "bird belt," therefore, must have extended in width from near Key West sixty miles to the westward to Tortugas, and an unknown distance into the unlighted Gulf of Mexico beyond. As to what happened to those too far west to sight the Dry Tortugas light, we can only conjecture, but, as the wind was behind them, driving them onward in their appointed direction, it is to be hoped that they were able to keep themselves in the air, and eventually reached the Florida mainland, not more than 300 miles distant. Once, in a heavy northwest gale in the Atlantic Ocean, I saw four species of land birds arrive on board a ship when the nearest land, the coast of Nova Scotia, was more than 600 miles away, directly to windward.

Bobolink; His Prelude

Ah! you tried to drown it in the rush
Of that bubbling stream of melodious glee,
But I heard it, and it will not hush,
Like the wraith of Spring it follows me.
'Tis her "*vale, vale*," lingering so
In those wild-sweet notes when you begin,
Like the upward creep of an elfin bow
On the strings of a fairy violin.

—*Mary J. Jacques.*

A Crow Study

By ALFRED C. REDFIELD, Wayne, Pa.

With photographs by the author

HERE, in southeastern Pennsylvania, the Crow is one of our commonest breeding birds. So it was with a feeling not unlike shame that I realized I had never seen the eggs in a Crow's nest. During the last of March, 1909, I set to work to remedy this, and especially to find a nest well adapted to photography. Nearly every patch of woods harbored one or more pairs of Crows, so I had no trouble in finding several dozen nests. They did not seem at all particular about the kind of tree selected.

Chestnut and beech, the prevailing woodland trees, were used most, but nests were also found in hickory, elm, cherry, and sweet birch. One nest was placed in the branches of an elm tree well out in the middle of open fields. The height varied from twenty to fifty or sixty feet, thirty-five feet being the average.

March 29, I found the nest I was looking for. A small patch of swampy woodland was separated from a large wood by a much-used road. Here in the solid crotch of a good-sized beech, was a nest. It was only twenty-five feet from the ground, a cinch to climb and within easy reach of home; but, better yet, the tree branched just below the nest, giving a substantial limb from



PLACING THE DUMMY CAMERA

which to photograph. As the nest was not quite finished, I could watch things from the start.

April 3, I was back again. The nest now held two eggs. The bird would not leave until I knocked on the base of the tree with a stick. The nest was made up of small twigs, mostly of beech, and a little green moss. It formed a bulky basket, fifteen inches across and half as deep. The well-formed hollow in which the eggs lay, was lined with strips of bark and some very coarse hair. It was seven inches in diameter and five inches deep. An egg was now added daily until April 6, when the set of five was complete. The eggs were somewhat smaller than a hen's. The ground color was greenish white, heavily spotted with lilac.

On April 14, I photographed the nest and eggs. A small stick was nailed to a convenient limb and to this the camera was clamped. With an eight-inch lens and 4 x 5 camera, I was able to get an image of the desired size. Removing

the camera, I nailed up a small wooden box in its place, wrapping it with burlap sacking. This dummy camera I left for the birds to become accustomed to.

A week later I returned, substituted a real camera for the dummy, covered it with the burlap, and attached to the shutter a thread leading off for fifty yards to some trees, behind which I hid. The Crows returned, but, seeing me, would not go near the nest. So, after waiting for half an hour, I left the thread and hid under a bridge some distance off. Soon the Crows were back again, and before I had been hidden fifteen minutes, one of them disappeared where I knew the



CROW ON NEST

nest must be. Waiting another quarter-hour for her to get well settled, I walked slowly up to the end of the thread and pulled. The Crow flew off at the click of the shutter, so I knew I had my picture. The green afternoon light was too far gone for further attempts, but development showed that they were not necessary.

It was four days before I visited my Crows again. On April 25, I found that the eggs had hatched, after an incubation of sixteen or eighteen days. One egg had disappeared and four little Crows lay in the nest, an ugly, confused mass of bare, pink flesh, covered only with a little down on head, back, and

wings. A slender neck raised a heavy, blind head upward, the fleshy bill opened and the Crow became a gaping mouth, begging for food.

A week later, I found only two young birds in the nest. But these made up for their lost brothers. They had nearly doubled in size, and everywhere dark



CROWS TEN DAYS' OLD

pin-feathers were appearing under the skin. The skin had now become an ugly, dark brownish gray color. The eyes had opened. The only noise they made, as they lay huddled in the bottom of the nest, was a hoarse croak. I removed a small worm from the ear of one. Whether it was a natural parasite or had merely taken refuge there I do not know. Three days later, when I photographed them, the only change was a lengthening of the pin-feathers.

By May 12, at the age of about twenty days, the young birds looked more like Crows. The pin-feathers had grown and the enveloping sheaths had burst at the end, causing the birds to be covered with dull black feathers. Only on the large flight-feathers and tail did the sheaths show. The day was hot and the sun shone down through the thin spring foliage on the unprotected backs of the Crows. They lay quietly in their nest, necks stretched out, mouths open, breathing heavily.

After four days more, I found that another change had taken place. The

feathers had opened more, white particles of the sheaths lying untidily on their black feathers. But it was their actions when handled that were changed. At first they had lain quietly, allowing me to handle them without resistance. Now all was changed, and they plainly showed their resentment.

May 22, I made my last visit to the nest. As I approached, the old birds flew about, cawing. As I climbed the tree, I could see the young birds standing on the edge of the nest, looking over at me. They were sleek, well-feathered fellows that might have passed for adult birds, had it not been for the undersized wings and tail, and the blue-gray eyes. When I reached the nest, the birds backed off onto a convenient limb, glancing at me and the ground in turn, as if trying to decide which was the lesser of two evils. Finally, the bolder decided in favor of flight. The other waited, and I was in hopes of getting his picture, but before I was ready he fluttered down. Once on the ground, he proceeded, with stately tread, to wander off through the bushes. Thus it was, after four weeks of life in their nest, that the young Crows set out on their first expedition into the world.



BLUE-HEADED VIREO ON NEST

Photographed by Ansel B. Miller, at Springs, Pa., June 16, 1908

The Migration of Vireos

SECOND PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data
in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

BLACK-CAPPED VIREO

Texas is the principal summer home of the Black-capped Vireo, whence it ranges north, occasionally to southwestern Kansas. Six years' records at Kerrville, Texas, show an average date of arrival of March 23, with the earliest March 19, 1901. The first was seen at San Angelo, Texas, April 6, 1885; at Gainesville, Texas, April 17, 1885; at Comstock, Texas, April 23, 1901; and at Winfield, Kansas, April 22, 1902. The last one seen at San Angelo, Texas, in 1884, was on September 25, and in 1885, on September 16. The first was seen on the volcano of Toluca, Mexico, September 11, 1893.

WHITE-EYED VIREO

Three forms of the White-eyed Vireo are at present recognized in the United States. One of them includes the non-migratory birds of southern Florida, a second the non-migratory birds in the valley of the lower Rio Grande of Texas, while all the migratory White-eyed Vireos belong to the third form. All the dates in the following tables apply to the migratory form, but it is not possible to trace or time the movements until the individuals have passed to the north of the regions occupied by the non-migratory forms.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Atlanta, Ga. (near).....	9	April 7	March 31, 1893
Raleigh, N. C.....	21	April 2	March 24, 1899
Asheville, N. C. (near).....	5	April 15	April 9, 1893
Washington, D. C.....	22	April 23	April 18, 1896
Berwyn, Pa.....	4	May 7	May 5, 1892
Englewood, N. J.....	10	May 7	May 3, 1902
New Providence, N. J.....	8	May 7	April 30, 1890
Shelter Island, N. Y.....	7	May 5	May 1, 1891
Southern Connecticut.....	12	May 7	May 4, 1902
Eastern Massachusetts.....	8	May 9	May 4, 1887
Kerrville, Tex.....	5	March 21	March 9, 1907
Gainesville, Tex.....	5	March 25	March 16, 1889
Helena, Ark.....	11	April 6	March 31, 1897
Chattanooga, Tenn.....	6	April 10	April 5, 1907
Athens, Tenn.....	4	April 12	March 24, 1907
Eubank, Ky.....	7	April 10	April 7, 1890
St. Louis, Mo.....	7	April 16	April 11, 1896
Quincy, Ill.....	3	April 28	April 25, 1883
Bloomington, Ind.....	7	April 25	April 21, 1900
Brookville, Ind.....	3	April 25	April 23, 1889
Waterloo, Ind. (near).....	5	April 30	April 25, 1902
Keokuk, Ia.....	7	May 6	May 4, 1902
Southern Kansas.....	5	May 6	May 4, 1906
Lincoln, Neb.....	-		May 12, 1900

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Waterloo, Ind. (near)	4	September 24	October 1, 1903
Eubank, Ky.	4	September 26	October 1, 1891
Athens, Tenn.	4	October 1	October 5, 1905
St. Louis, Mo.			October 14, 1885
Shelter Island, N. Y.			September 30, 1901
Central New Jersey	4	September 19	October 15, 1905
Philadelphia, Pa. (near).....	3	September 23	October 15, 1888
Washington, D. C.	4	October 8	October 19, 1890
Raleigh, N. C.	6	September 21	October 14, 1892

HUTTON'S VIREO

The several forms of this species range in the western United States from western Texas to California and north along the Pacific slope to southern British Columbia. Their short migration in southern Arizona must be performed very early in the season, for, by the middle of March, they had already reached their breeding-grounds in the Huachuca mountains, at 5,000 feet altitude. The birds of the Pacific region are slightly migratory, but many remain throughout the winter so near the northern limit of the range, that no definite data are available as to the times of migration.

BELL'S VIREO

This species winters in Mexico, and breeds from northeastern Mexico north to Nebraska. It is one of the slower migrants, for the dates given below show that it occupies five weeks in the journey from San Antonio, Texas, to Onaga, Kansas,—an average speed of less than twenty miles a day.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
San Antonio, Tex.	6	March 31	March 19, 1904
Austin, Tex.	3	April 12	March 30, 1893
Bonham, Tex.	3	April 21	April 19, 1889
St. Louis, Mo.	5	April 27	April 25, 1883
Keokuk, Ia.	8	May 6	April 30, 1895
Grinnell, Ia.	5	May 10	May 5, 1886
Sabula, Ia.			May 10, 1897
Manhattan, Kans.	6	April 30	April 24, 1891
Onaga, Kans.	16	May 5	April 30, 1895
Lincoln, Nebr.			May 13, 1900

FALL MIGRATION

The average of the last seen for five years at Grinnell, Ia., is September, and the latest September 12, 1886; at Onaga, Kans., for thirteen years, is September 11, latest September 27, 1905. The latest date at Jasper, Mo., is September 20, 1902, and at St. Louis, Mo., September 22, 1905.

LEAST VIREO

The Least Vireo winters in Mexico, and comes north in summer to southeastern Arizona, southern Nevada, and to Sacramento, Cal. Some dates of spring arrival are: San Felipe Cañon, Cal., March 23, 1895; Pasadena, Cal., March 26, 1896; San Diego, Cal., April 2, 1885; Agua Caliente, Cal., April 1, 1886; San Buenaventura, Cal., March 26, 1872. The first reach the northern limit of the range by the middle of April, and depart south early in September.

GRAY VIREO

From its winter home in Mexico, this Vireo comes north in summer to northern New Mexico, southern Nevada, and southern California. A few dates of arrival are: Santa Catalina Mountains, Arizona, April 1, 1885; Campo, Cal., March 24, 1876; a late fall record is September 14, 1889, at the Grand Cañon of the Colorado, Arizona.

Further Note on Albino Flickers

In the spring of 1908, a Flicker's nest, containing two albino birds, was found near New Paris, Ohio. An account of these birds, together with a photograph of them, was published in the May-June, 1908, number of *BIRD-LORE*.

About June 15, 1908, this nesting-site was visited, and the nest was found to be occupied by four young Flickers, one of which was an albino, the others being normal in color. The albino was in every respect similar to those of the previous year. Close examination showed a faint shadow of the normal markings on the plumage. Thus the black band on the breast could be seen by careful examination. A close inspection of the specimen which had been secured the year before showed a similar shadow of the normal markings.

In order to determine whether the parent birds were normal in color, I watched the nest until both were seen. Neither showed any perceptible departure from the normal markings.

The young birds left the nest about one week after my visit to it. The white one was seen but once, about three weeks later. It displayed the same tendency to circle, when flying, that was remarked of one of the albinos of the previous brood.

One of this pair of Flickers apparently possesses an inherent tendency to produce albinism, and is therefore of unusual interest. The developments of the coming season, if the pair returns, will be carefully observed.—LOREN C. PETRY, *Urbana, Ohio*.

Notes from Field and Study

A Redpoll Invasion

Upon my arrival at State College, in the very center of Pennsylvania, I fondly cherished hopes of seeing Redpolls, but these were soon dispelled by the reports of the various bird students that they were not found in the vicinity. It was, therefore, with an exultant thrill that I shortly discovered that the winter of 1908-1909 was one to be long remembered by the legions of Redpolls which cheered the heart of the ornithologist on all his winter walks.

It was on December 12, 1908, that the forerunners of the hosts which were to come were first observed. We were returning from a vain search for Ducks, and, while beating our way across the fields, against a blinding snowstorm, suddenly a flock of small Finches flew rapidly by and settled on the drifting snow. In a moment I recognized the note of the Redpoll, and, all aglow, I hurried forward and watched them as they flitted nervously about over the surface of the snow, frequently feeding on the low weed-stalks which everywhere rose above the rapidly deepening mantle. But, surely, they could not all be Redpolls! No, for there, as they scurried about, we frequently caught sight of pale yellowish wing-bars among the plainer pinions of the mass. And there, scattered amid the flock of perhaps thirty Redpolls, were probably twelve Pine Siskins. Well content, we left them, and, as we hurried home in the twilight, several other flocks took wing at our near approach. Evidently, the Redpolls were here after all!

But these were only the smallest fraction of what was to come. All during the winter months, they were found in legions throughout the Nittany Valley. Not only in the fields, but, also, in the orchards, in the town, and even on the college campus did we hear their cheerful notes. As March drew near, every day I looked for their departure, yet they showed no

signs of leaving. Not until the last of the month did they grow scarce, and the last stragglers lingered until April 10,—days after the arbutus and hepatica had burst their swelling buds.

What impressed me most was their tameness. Repeatedly have I approached to within a few feet of a feeding flock, and they evinced no alarm. When they did fly, it was only to make a few undulating circles, and then return to the vicinity of their former feeding-place. Frequently, part of the flock would arise, and individuals would continue their search for seeds, totally unconcerned over their departing comrades. On near approach, the males could be easily distinguished from the females by their bright rosy breasts, varying in intensity of coloration as the ages of the birds.

They fed indifferently on the snow or perched upon the weed-stalks, those below picking up the seeds shaken down by the more industrious gleaners. Many a field have I seen literally covered with a network of their dainty tracks in the new-fallen snow; yet not all obtain their sustenance in this manner, for on several occasions, I have noticed them picking vigorously at the buds of the maples in early spring.

Unceasingly, as they flew in undulating circles overhead, or fed companionably on the ground, we heard them call—a clear *per-chee* varying to a sharp *cle-e*—somewhat resembling the similar notes of the Goldfinch, yet distinct. But in early March the males began to sing, and I was privileged to add a new bird concert to my category. A vigorous, wild, Goldfinch-like melody it was, somehow bringing to me pictures of the cold, wind-swept barrens of northern Labrador, where these tireless bits of bird life would soon nest. Insect, as I did at near view, thousands of Redpolls, yet not one was referable to any form other than *Acanthis linaria*.

The Redpolls have gone, yet vividly,

in my mind's eye, I see the flocks feeding before me in the bleak fields or hear them go calling overhead. And when the snow once more steals softly down and the winds bring cold blasts from the frigid north, I shall wait patiently to catch the first glimpse of my sociable winter companions.—the Redpolls.—RICHARD C. HARLOW, *Pennsylvania State College.*

Redpolls and White-winged Crossbills in New Hampshire

Were Redpolls unusually abundant everywhere this year, or were we remarkably favored? Two amateurs in the Winnepesaukee region have been watching these birds for five months, beginning with two on November 24, 1908, and reaching a climax of hundreds upon hundreds in the last days of March and the first of April, 1909. One seldom sees a thousand birds together in New Hampshire, even in migration periods, but there must have been that number of Redpolls in Folsom Wood on March 31. It was easy to estimate the little groups upon the ground within sight of the old quarry hillside where we stood to watch, but the trees above and back of us were full, and as many more of changing groups formed and reformed in dissolving views as far as eye could reach. When I left my friend at this station and allowed my snowshoes to carry me some distance from the road which we had traveled to the quarry, I found as many hundreds circling through the deeper woods, while her number suffered no decrease. If individuals broke away from any special group, as they evidently did in all the rapid whirls from ground to trees and back again, others took the places left till the ranks were generally more than full. Did every Redpoll wintering south of Laconia in New Hampshire start north in time to reach the shore of Winnisquam as early as this morning of March 31?

Our first glimpse of Redpolls this winter, and only the second or third in a lifetime up to that November 24, was while we walked at the twilight hour in the pasture skirting our lake between the city

streets and the Folsom Wood already mentioned. Guided by a rather plaintive call, we found two birds on birches just above our heads; but identification was impossible in that gray light. Siskin or Goldfinch was considered probable at first. Then we saw they were not streaked enough for Siskins, and the black spot under the chin proved they were not Goldfinches, in spite of the caps we called black. My note-book records as the result of this twilight observation: "Two strange birds unidentified; white wing-bar the most prominent feature; some streaks on the flanks, breasts otherwise clear; dark heads suggest black caps." Redpolls were not thought of. We did not know then how black the crimson crowns can look when not in strong light, and we had seen only two March flocks before, so were no expecting them to visit our region in November. Three days later our birds were heard again, and followed till they perched to feed contentedly on birch catkins, so near our eyes that red caps and blackish throats were studied without glasses as well as with them.

After this experience, all of Thoreau's notes on Redpolls were collected by my friend, and proved most interesting reading, as well as the descriptions in our bird books. Two things in our reading caused surprise. Our helpful Hoffmann and Chapman did not mention the white wing-bar we had called our most prominent feature, but Thoreau confirmed our observation, for his careful notes on first sight of a flock, November 13, 1852, mention "distinct white bar on wings." Thoreau, on the other hand, never seemed to see the black we marked upon the throats, and his many puzzled guesses at identification made us quite puffed up with knowledge, thanks to our superior handbooks.

In December, our two Redpolls increased to dozens and fifties, till the "mewing" call, as Thoreau termed it, no longer gave surprise when the flocks wavered through the air above us or settled for a few minutes to feed on birch and alder catkins near our snowshoe path. Not until the last of January did they

come very near our houses, and seldom then where they could be watched from windows. We could have made little study of them through the winter if we had not used our snowshoes, but with these we went out in all kinds of weather and walking, as our blackened shoes now testify. To own snowshoes merely for the sport would make them almost valueless to me. I am not strong enough to climb winter mountains or take cross-country tramps of many miles, even when snowshoeing is ideal. Yet, on almost any day, it is a wonderful experience to leave the city streets and walk out into the broad white expanse of such a pasture as ours beside the lake, to thread the narrow paths of the birch thickets, or follow broader avenues beneath majestic evergreens. No tree laden with Christmas trinkets was ever so beautiful as these when clothed in glittering ice or feathery snow piled high on every branch and twig.

When the last ice-storm continued three whole days, we began to be afraid our Redpolls must be suffering from hunger. A walk in the pasture quickly reassured us. There were the Redpolls clinging to the catkins as merrily as ever; so I suppose they found the under side unsheltered by the ice, or liked to eat them ice and all.

My notes for January 22 record that we came upon our bands of fifties gathered into hundreds. The day was very windy and they were in a rather sheltered dell. We saw one Chickadee among them, a friend whose absence we had spoken of with mourning all the winter. For two years before the Chickadees made almost daily visits to the basket of crumbs hanging on my side porch. We have been told that the Red-breasted Nuthatches drove the Chickadees from Bear Island a few winters ago. So we have sometimes questioned whether it was not the Redpoll hordes that urged our own familiar friends from their accustomed haunts this year. Toward spring, we found the Chickadees quite numerous again, however, and often right among both Redpolls and Nuthatches in apparent peace and happiness.

On three or four occasions, we were delighted by discovering Crossbills where we usually saw only Redpolls. The Americans we welcomed as our own small flock, because they were just like the family raised in our neighborhood, judging from our first sight of a single pair in May and then a group of six or seven birds appearing in late summer. To be sure, though, there is memory of an undue number of red birds in the summer flock against the theory of family with offspring of our pair so young, but the numbers were about the same in January as in August, and apparently in the same proportion. On March 13, a friend who joined our walk to see the Redpolls we had so often mentioned did not behold or hear a single one that day, but was granted a sight to us much rarer. We were at first deceived by the call-notes and simultaneous twitter so much like the Redpolls', when a flock of more than twenty birds burst from the evergreens and settled on the quarry hillside. Two brilliant males of rose-red hue and flashing white on wings solved a puzzle that would have been much harder for us if we had continued to gaze only on the backs of immature and females. None of us can ever have a better chance to study White-winged Crossbills.

These experiences made us search most carefully for other birds among the Redpolls, when we began to hear new trills, in addition to the familiar twitter of four months. As spring was fairly here when the jingle changed, and no more discoveries were made, however long we watched, we finally accepted the new song as due to springtime joys in the breasts of our friends of the crimson crown.

To distinguish Greater Redpolls from Lesser is certainly beyond the power of amateurs. However, two birds found on April 2, away from all the rest of the flock, as it happened, were so very white, so different from hundreds of others studied with equal care, that we think we cannot be mistaken in naming these as "Hoary Redpolls. My friend, who had never heard of such a kind, was the first to point

out the white effect. The birds were remarkably quiet for a long time, as if they were willing to show off their unusual markings. To call it absence of markings might be the better way to describe the difference, as the streaks were so very faint, the V above the tail so clear and white, and even the caps were pale.

Our April weather has been too wet and windy to allow determining the exact date of the departure of the Redpolls for the north. The great numbers disappeared gradually, after coming around our houses in swarms on April 4 and 5. The last I saw for perfect identification were in a thicket near our avenue, on April 12.—BESSIE SCRIBNER DAVIS.

Redpolls in New Jersey

On February 2, 1909, I observed in the central part of Gloucester county, New Jersey, perhaps one hundred (I think there were more) Redpolls, searching, with their characteristic enterprise, the dead grass and weed heads. I encountered them in two different localities, perhaps four miles apart. I have never seen them so far south as this before.—CHAS. D. LIPPINCOTT, *Swedesboro, N. J.*

Pine Siskins in Vermont

We have been favored with the presence of large numbers of Pine Siskins this fall and winter. In the fall they, at times, seemed fearless, alighting on the trees and on the ground near the house, and feeding on the aphides that were very plenty last year. Always they were in full flow of conversation, and we had great opportunities to learn their notes and their marks. Why do none of the bird books (that I have seen) mention the peculiar note that sounds like *whizz*? It is the first thing that called my attention to the birds. I heard it long before I knew its source, and it seems a strong distinguishing point. When the whole flock *whizzes*, who can but notice the sound? Sometimes, when they alight, they have notes that sound like the peeping of frogs in spring. Often

there is the call like a Goldfinch, and as they fly, a note like the English Sparrow's call is given.

All of our cone-bearing trees were full of cones this past winter, especially hemlocks, which were really brown with them; and the yellow birches are loaded with their large catkins. Bits of the cones and catkins cover the ground beneath the trees. Does this abundance account for the presence of the Pine Siskins?—E. F. MILLER, *Bethel, Vermont.*

The Woodcock's Song

Dear Editor of Bird-Lore:

Please why that exclamation point after the note about two Woodcock singing, on the editorial page of March-April BIRD-LORE?*

To me, the Woodcock's song is charming, because of its fitness to the character of the bird, and to the surroundings.

When low-flying clouds, all tattered and torn, go drifting along the sky, and Æolus picks threnodies away up aloft among the clashing branches of mighty oaks, one who is braving the storm loves to see the great Eagle launch from a cliff and hurl himself against the onset of the blast, screaming a defiance that must arouse the admiration of his queen upon the eyrie.

When the fret of spring fever takes us out to the warm brush-lot, in a spirit of unrest and of disharmony, the Yellow-Chested Chat promptly joins us in mood,—turning somersaults, mocking at everything, and singing a clown song that almost anybody can see is meant for nothing more than to make the visitor laugh. Is it possible that his mate is enamored by such jesting? "As the husband is, the wife is," according to the fine old poetry of a former day, and perhaps she is watching from a witch-hazel bush and giggling away at his antics.

After a while, June gets to be surely June, and the Bobolink, bursting open

*Our exclamation point referred not to the character of the birds' song, but to the early date at which they sang it.—ED.

his safety-valves of joy, sets us to vibrating in tune with his song.

If one feels particularly companionable, what delight there is in the blithesome camaraderie of Red Crossbills, as they cheerily and merrily assure each other of good fellowship while traveling along through their airy roads among the tops of the pointed firs, in a spirit that belongs to no lower levels.

The day's work is done. Evening calm settles over forest and field. Hear the White-throated Sparrows say to each other that peace reigns in the village and all is well until the morrow. Then comes the spiritual rhapsody of the Hermit Thrush, in the harmony that inspires one who, far from the crowd, is all alone with his better self.

Among all bird songs appropriate to the environment, what can be more delightful than the song of the Woodcock? It is the song of the tenderest of lovers, and it strikes the very note that poets have sought in their ideals of love in a cottage, or of a secluded spot in some far wilderness. The song of the Woodcock is the dearest song in the world. Would that some one might sing to me such a lullaby. All is quiet in the valley. Moonlight is transmuting spring mist into gold. The jingle of silver bells of the Hyla chorus sounds faintly from the distant marsh. Then it is that the Woodcock looks at his beautiful bride upon the nest among warm, loose leaves, and, springing aloft with twittering wing, stills the wing note, and warbles so softly and sweetly to his true love that it seems almost sacrilege to listen. It is not to the multitude that he sings. Oh, no indeed! "It is just for you and me, Betty. Not for the world would we disturb any one with our affection, but we love each other, and our happiness is complete."

I wish the Woodcock would not give his absurd little bleat before springing on wing for his song, but it is only a mannerism, and we have to allow all sorts of mannerisms in our friends, because Lord knows how many we have ourselves.—
ROBERT T. MORRIS, *New York City*.

Observations on the Life History of the Bobolink

Early in the afternoon of June 16, 1908, I was going through a hay field near Woodmont, Conn., in search of a Meadowlark's nest. The field was about three acres in extent, bordered on three sides by roads, and on the fourth by a fresh marsh. The grass was about eighteen inches high, and ready to be cut.

In the course of the search, three Bobolinks—a male and two females—were seen. When I reached a certain spot in the field, it was evident from the action of one of the females, who carried a grub in her bill, that I was in the immediate vicinity of the nest.

I sat down and awaited developments. The female nearest me continued to fly about, alighting often on the tops of dock stalks standing above the general level of the grass. Meanwhile, female No. 2 was flying about some distance off, also with grubs in her bill. The male consorted with both; now caressing (or chasing) one, now the other. He manifested much alarm over my presence when with the female nearest me.

After some twenty minutes' delay, female No. 1 dropped into the grass within a dozen feet of me. I could hear the buzz of the young as she fed them. After a few minutes' careful search on hands and knees, the nest was found. It contained five young, about half-grown. The nest itself did not amount to much, being nothing but a depression in the ground, lined with grasses.

About this time the male disappeared, and did not figure in subsequent proceedings that day. After locating the first nest so as to be able to find it again, I retired to the top of a rail-fence across the road, hoping to find the second nest. Long before female No. 2 flew to her nest, female No. 1 was feeding her young at nearly regular five-minute intervals. Female No. 2 was very shy, and it took over an hour to find her nest. She would fly into the grass at various points and apparently walk to the nest. At length I found

it by hearing the young complain. It contained five young in the same stage as those in the first nest. It was also exactly like it in structure.

The next day I visited the nest again, and took an accurate measurement of the distance between them. It was a trifle less than fifty-five feet.

To my surprise, the first nest contained but one bird,—a dead one. Both females however, were still in the neighborhood; but the male was heard singing only once, at a considerable distance away.

Female No. 2 began, shortly after I left her nest, to feed her young, without any very great fuss. Female No. 1 was flying about, but her actions were not those of a bereaved bird; rather, those of one having a nest nearby; moreover, she carried grubs in her mouth.

I retired to the top of the rail-fence across the road and awaited developments. It soon became evident that female No. 1 still had young somewhere in that meadow. She would fly up to a spot almost in front of me, and much nearer the road than either of the nests. Here she would sit on the tops of dock stalks and scold, occasionally disappearing into the grass, where I fancied that once or twice I heard the buzz of the young; after this she would fly directly away, shortly to return with another grub.

Lack of time prevented my searching for the young, which I feel sure were hidden in the grass.

On the afternoon of June 19 (two days later), I visited the nests again. Nest No. 2 was deserted. The two females and the single male were flying about a short way off.

June 24, I passed near a grass field across the marsh before mentioned. This field was some two or three hundred yards from the site of the nests.

Two females and a single male Bobolink were seen flying about, the females with grubs in their beaks. The field containing the nests was deserted and had been since the 20th, at the time I was first observing the Bobolinks. I passed by and through this field daily, and

feel confident that no Bobolinks nested there.

June 25 (next day), I spent some time beating about in this field, and started five young Bobolinks, just able to fly. The two females, and, part of the time, the male, were close by, and manifested much concern. Both the former had grubs in their bills. Probably more young birds were in the grass than I flushed.

These facts, I think, give very good evidence that the Bobolink is at times polygamous. For at no time did I see more than one male, and to the best of my knowledge, there was not another pair of Bobolinks nesting within half a mile of the place, although the country was favorable.

They prove, it seems to me, that the young leave the nest before they are able to fly, and are cared for by the females (I never once saw the male with a bit of food of any kind in his bill) for at least a week after they leave the nest. These facts may have been recorded before, but not to my knowledge.

While watching the Bobolinks, I noticed a somewhat similar condition of affairs among a colony of Red-winged Blackbirds nesting in the alders in the swamp between the two fields. There were only two or three males to a dozen or so females. The old birds tended the young after they had left the nest, and were hidden in the high grass with the young Bobolinks. The male Red-Wings, however, took no part in the care of the young.—P. L. BUTTRICK, *New Haven, Conn.*

Evening Grosbeaks in Massachusetts

I wonder if many other readers of BIRD-LORE have been seeing Evening Grosbeaks this past winter or early spring? March 7, I saw a flock of seven adult males and between ten and twenty females and immature males. March 20, I saw a flock in the same place with the same, or nearly the same number of species. I think that most of the gray individuals with yellow tinges on the head and rump, must be immature males, because they

called more and sometimes warbled quietly. I have seen them often since, the last time being March 28, and, lately, I found the flock divided into all gray in one part, and adult males with three or four gray ones in the other, the two divisions feeding a quarter of a mile or so apart in the same wood. In the afternoons I could only find the gray ones. March 27 and 28, I found only the division of adult males and the three or four gray ones, and, the weather being mild, they called loudly, but did not sing. Their food, as far as I could see, consisted of maple seeds and larch tree buds.

This March, I also have seen several White-winged Crossbills, and I found them tamer than the Evening Grosbeaks.—ANNE H. WHITING, *Lanesborough, Mass.*

The Evening Grosbeak in Wisconsin

While the Rose-breasted Grosbeak is well and favorably known to most bird-lovers, its Canadian cousin, the Evening Grosbeak, is a comparative stranger to many, even in the northern part of the United States.

Such, at least, had been my experience until the last winter, when a flock of more than one hundred of these splendid creatures visited our city. To what disturbances in their northern home we were indebted for their presence, I cannot tell, but certain it is they arrived early in February and prolonged their stay past the middle of March. For a few weeks after their arrival, the Grosbeaks traveled about the city together, sometimes filling an entire bare tree with their brilliant colors.

My first view of the visitors was obtained one bright day during the last week in February. And such a view it has rarely been my privilege to have! Opening an outside door, my attention was arrested by a distinct munching sound. It came from a small box-elder tree, some sixty feet from the house. There, perched on the limbs, and hopping on the ground below, were the Grosbeaks. industriously

gleaning their noonday meal from the dry seed-pods hanging on the tree.

I strolled out under the tree, no attention being paid to my presence, and I had unlimited opportunity to study the strangers at close range.

Finally, one flew away to a large tree across the street, and, after I had examined it for a minute or two, gave a clear chirp. At once the entire flock took wing and joined him, to finish their meal on maple seeds.

They seemed to feel little fear of man, and were reported as feeding with Pigeons and chickens on very sociable terms.

The children in our school were encouraged to feed them, and their interest may have helped to prolong their stay.

Whenever the Evening Grosbeaks choose again to include Wisconsin in their itinerary, they may be sure of an enthusiastic welcome in our city, from all who made their acquaintance.—GERTRUDE M. TITUS, *Fond du Lac, Wis.*



CARDINAL

The Ipswich Cardinal

The Cardinal, of which mention was made in the March number of BIRD-LORE as being in Ipswich in January is still at the same farm, and has been a constant resident there. As the warmer days approach, he is beginning to sing a little, and is making trips of a day or two duration away from the clump of spruce trees to which he has constantly held fast through the winter. The accompanying photograph was taken of him at his feeding—

dish, to which he still comes regularly three or four times a day, except during his excursions. The bird has attracted much attention in the local press, and a number of bird students in the radius of thirty or forty miles have been, at various times, to see him. It is a curious fact that a Carolina Wren has also been living in some low Rocky Mountain spruces within a few hundred feet of the Cardinal, during the months of February and March, making two rare birds well to the northward of their range.—FRANK A. BROWN, *Beverly, Mass.*



A BOBOLINK TRAGEDY
Photographed by R. H. Beebe

A Bobolink Tragedy

I am enclosing a photograph of a Bobolink which had evidently hung itself. I happened to discover the subject of this picture while driving along a country

road. The bird had undoubtedly slipped or in some other manner got its head caught in the crotch of the limb. The photograph shows the bird exactly as I found it, with the exception that I had to lower the limb, as it was about ten feet from the ground. In doing this, I in no way touched or disturbed the bird.—R. H. BEEBE, *Arcade, N. Y.*

A Course in Bird Study

For the last three summers, there has been given a course in bird study at the Biological Laboratory of the Brooklyn Institute of Arts and Sciences, of which Dr. Charles B. Davenport is Director. The Laboratory is located at Cold Spring Harbor, Long Island, New York. It is thirty miles east of New York City, on the north side of Long Island, within three miles of ex-President Roosevelt's home. In the immediate vicinity are four fresh-water lakes, sphagnum bogs, pine barrens, forest-clad hills, salt marshes, and an arm of Long Island sound. This variety of habitat is conducive to a variety of birds. The Little Green Heron, the Black-crowned Night Heron, and the Spotted Sandpiper nest in the vicinity; and, besides these, a great many land birds. Last summer, more than two hundred nests, either in use or abandoned, were located and identified.

The course, which consists of twenty lectures and daily excursions for field identification, is in charge of Mrs. Alice Hall Walter, co-author of 'Wild Birds in City Parks.' In addition to the regular course, special problems for individual study, relating to the food and habits of birds, are given. During the six weeks, a beginner can get an introduction into ornithology, and can become more or less familiar with some sixty species of nesting birds.

The subjects of the lectures given last summer are as follows: (1) Nesting Birds of Cold Spring Harbor; (2)* Skeleton; (3) Study of a Bird Family—Warblers (4) *Anatomy; (5) Study of a Bird Family—Sparrows; (6) *Feathers and

Molt; (7) Other Passeriform Families; (8) Water and Shore Birds; (9) *The History of Bird Classification; (10) The Facts of Migration; (11) *Theories of Migration; (12) The Ancestry of Birds; (13) Distribution; (14) Distribution in America; (15) *The Bird's Place in Nature; (16) *The Economic Value of Birds; (17) Enemies and Protection of Birds; (18) Methods of Study in Schools; (19) *General Methods; (20) Literature. The lectures marked with an asterisk were given by Dr. H. E. Walter, Professor of Comparative Anatomy in Brown University.

Prompted by the growing interest in this course, the management of the Laboratory has announced that it will be given again during the summer of 1909.

A Devoted Parent

For several summers, a pair of Baltimore Orioles had nested in an apple tree near my study window.

Last summer, when the nest was full of young ones, the mother bird was killed, and the father bird had a broken wing. When I discovered this tragedy, the father was carrying food to his family.

There was a grape-vine growing under the tree, untrimmed and lawless. Some wayward branches had caught hold of the lowest apple boughs, and a pole, leaning against the trellis, formed a continuous roadway from nest to ground. Down this road the poor bird would hop, and forage for food. He never went far from the grape-vine, and kept a sharp lookout for enemies. After filling his mouth with food, he would commence his tedious journey up the grape-vine, one hop at a time,—and thus cared for his family until they reached the flying age and were able to care for themselves.—
JEAN MARTIN, *Hillsdale, Mich.*

Stormbound Birds

On the morning of April, 29, there was ten inches of snow on the ground at seven o'clock, a strong southerly wind was blowing, and snow was still falling steadily.

Icicles formed at all points where water dripped, and the air was piercingly chilly. We were on the lookout for hungry birds, and before noon found the bewildered creatures flocking about house and stables, eager for crumbs and seeds. About this time, a fierce thunder-shower drove them to every sheltered spot about the place. Chippies hopped at our feet on the porches and picked up the crumbs. Robins were less friendly, but readily came to the window-sills for food as soon as we went indoors. The gentle Chippies disputed with English Sparrows for crumbs; and I saw one fly fiercely at a Sparrow and eventually drive off the aggressive foreigner with apparent ease. Juncos, Phœbes, Song Sparrows and Chippies swarmed into the opened stable doors and helped themselves freely to seeds, the Juncos alighting on outstretched fingers in their eagerness for luncheon.

It was amusing to note the difference between the sleek, trim Juncos, literally tripping over the snow, and the tumbling ruffled Robins, flapping and fluttering clumsily and helplessly about. All day we doled the crumbs and seeds, fearing night would still find some visitor unsatisfied, as well as bedless. A Robin had eggs in a nest on our back porch, but she never went near them during the day, and did not spend the night there. The country has been full of Bluebirds all the spring, but since the storm none have appeared, so far as I know.

Next morning, two Horned Larks were hopping about in the street in front of our house, searching for breakfast. They took wing as I approached, but wheeled and returned, uttering their peculiar flight-notes as they came. Their babies in the soft cradle were doubtless under the snow on some high, windy hill not far away.

A male American Crossbill flew against a window and was found dead on a porch floor. A female was discovered, and fed, becoming so interested in prying into a pine cone that was offered that I easily picked her up and held her while she took some crumbs. She seemed perfectly fearless, and flew from the hand only when

her hunger was fully satisfied. A flock of American Crossbills and a few White-winged ones have spent two months or more in some pines in our town, and a pair of Red-breasted Nuthatches have fed from a tree close to the window in the same grounds with the pines. Downy Woodpeckers have also shared the suet with them, both seemingly unmindful of eyes and glasses that were prying into their affairs, on most occasions when they came for meals.

By the first of May, a very green world emerged from its white blanket, and there was a busy horde of Robins hard at work on our lawn when I looked out early in the morning, and today the business of reconstructing nests seems to be in progress.—FANNY S. WATROUS, *Wellsboro, Tioga county, Pa.*

More Central Park (New York City) Notes

See, also, BIRD-LORE for December, 1908

Great Horned Owl.—I should like to record a Great Horned Owl which my brother and I saw on the afternoon of December 10, 1908, in the Ramble. It was completely dazed, and permitted a very close approach. We flushed it from a dense thicket of creepers near the ground. This is the first time that this Owl has been seen in Central Park, to my knowledge.

Cape May Warbler.—In addition to the individuals recorded in the December (1908) number of this magazine, I should like to record another seen on October 11. It was a male.

Black and White Warbler.—An individual of this species was seen for several days in the Ramble in November, disappearing after the fourteenth of the month. I did not see it, but several other observers noticed it. This is, of course, a very late date.

Blackpoll Warbler.—This Warbler was excessively abundant this autumn. It arrived August 21, and I saw it last on October 22. This date is two weeks later

than that given in 'The Warblers of North America.'

Brown Thrasher.—I have three records of this bird in November,—one on the sixth, two on the ninth, and one on the thirteenth.

Pine Siskin.—Mr. Stanley V. Ladow and I saw a flock of these birds on October 17. This bird has always been rare in the park. The date is also an early one.

It might also be of interest to add that I have seen 104 species in the park during 1908. I also know of sixteen other species seen by other observers, making a grand total of 120 species. It has been a very good year and four birds have been added to the park list, which now contains over 160 species.—LUDLOW GRISCOM, *New York City*.

Nesting Notes from California

On May 28, 1908, I found a triple nest of the San Diego Red-winged Blackbird in a clump of weeds and tulés on Coyote creek. The nests were built one directly above the other, and so close together that the two lower ones could not be entered by a bird. All the nests were apparently complete, although none of them contained eggs. I could not discover any cause for the building of this triple nest.

On June 6, 1908, I found a Mourning Dove's nest containing four eggs. The nest was in a eucalyptus tree about eight feet from the ground, and was the usual platform of sticks, except that it was placed on the remnant of an old California Shrike nest. When discovered, two of the eggs were well incubated, while the other two were fresh. On June 14, the first two eggs had hatched, and on the 21st the birds left the nest. Meanwhile, one of the other two eggs disappeared, while the other egg hatched, but the bird died in the nest. I do not know whether both sets of eggs were laid by the same bird or not.—JOHN MCB. ROBERTSON, *Buena Park, Orange county, Cal.*

Book News and Reviews

IN AMERICAN FIELDS AND FORESTS. By HENRY D. THOREAU, JOHN BURROUGHS, JOHN MUIR, BRADFORD TORREY, DALLAS LORE SHARP, and OLIVE THORNE MILLER. With illustrations from photographs by Herbert W. Gleason. Houghton, Mifflin & Co. 12mo. Pages ix+378. Seven full-page plates. \$1.50, net.

This volume contains selections from the writings of the distinguished group of literary naturalists whose works are published by Houghton, Mifflin & Co. To have them all represented in a single volume emphasizes, possibly, the differences in mental attitude toward their subject, as well as their methods of presenting what they have to say about it. Thus, by turning a page or two, we may compare Thoreau with Muir, or Torrey with Burroughs, discovering, for example, how Thoreau in writing of 'Wild Apples,' or Muir of 'The Sequoia,' reveal as much of themselves as of their themes.—F. M.C.

THE BIOTA OF THE SAN BERNARDINO MOUNTAINS. By JOSEPH GRINNELL. University of California Publications in Zoölogy. Vol. v, No. 1, 8vo. Pages 1-170. Plates 1-24. Dec. 31, 1908.

Doctor Grinnell presents here the results of three seasons' work in a region of great biologic interest. He devoted his attention not alone to birds, but, also, to mammals, reptiles and plants, having made, in fact, a biologic survey of the area under consideration. Pages 50-134 are devoted to the annotated list of the 139 species of birds observed, the often extended remarks on habits or critical comments on relationships bearing witness to the author's powers of observation in the field, as well as to the keenness of his discrimination in the study. There is, also, an important introductory chapter on 'Bird Population and Its Modifying Influences.'

We have not space to review this paper in detail, but we heartily commend it to ambitious young bird students as a first-class exposition of modern methods in faunal research.—F. M. C.

BIRDS OF THE WORLD: A POPULAR ACCOUNT. By FRANK H. KNOWLTON; with a chapter on the Anatomy of Birds, by FREDERIC A. LUCAS; the whole edited by ROBERT RIDGWAY. New York. Henry Holt & Co. 1909. Roy. 8vo. XIV+873 pages; 16 colored plates; 236 half-tones and line cuts.

Since the appearance of the Standard Natural History in 1885, no general work on the birds of the world has been published in America. Several volumes (e. g., the volume on birds in the Royal Natural History, and Evans' 'Birds') have been placed on sale in this country, but they were not prepared with an American audience in mind. There was, therefore, abundant room for a work of this character.

Doctor Knowlton has, in our opinion, wisely devoted his attention chiefly to the biographies of the species treated. Those who are interested in the structure and classification of birds prefer, as a rule, to get their information from original sources, where it is presented with a detail not possible in a work of this kind.

We have, therefore, an introduction dealing with the general characters of birds, their molting, nesting, distribution and migration, together with a chapter on their anatomy by F. A. Lucas. Following this introductory matter (pages 1-44), and adapting essentially the classification of Gadow, the orders, families and representative species of the birds of the world are treated serially. The ever-present necessity for condensation keeps constantly before the author of a volume of this nature the matter of selection and rejection, both as regards the species to be included and what is said concerning them, but Doctor Knowlton has here shown excellent judgment, although he does not appear always to have availed himself of the latest sources of information, and his painstaking labors have given to us one of the best general works on biographical ornithology with which we are familiar.

The black-and-white illustrations are

borrowed from various duly acknowledged sources, though we think it would have been well to state that those accredited to the American Museum of Natural History are from groups in that institution. The sixteen colored plates were prepared especially for this work. They exhibit a high order of artistic excellence without, however, revealing that talent for bird portraiture which distinguishes, for example, the work of Fuytes.—F. M. C.

CAMPS AND CRUISES OF AN ORNITHOLOGIST. By FRANK M. CHAPMAN. D. Appleton and Co., New York. 1908. 8vo. 432 pages, two colored plates and 250 photographs. \$3, postpaid.

One of the most interesting popular works on birds recently published is Chapman's 'Camps and Cruises of an Ornithologist.' It is ostensibly a record of the field work undertaken by the author during the last seven years, while collecting material for the 'Habitat Groups' of North American birds for the American Museum of Natural History. These groups are designed to illustrate not only the habits and haunts of the birds shown, but also the country in which they live. The arrangement of the book is geographical rather than strictly chronological, and the narrative is accompanied by a wealth of illustrations which renders the scenes described more realistic than would otherwise be possible.

The book is divided into eight parts, each devoted to a definite region. Beginning with 'Travels About Home,' the reader is given an insight into the habits of Jays, Meadowlarks, Nighthawks and other birds which are common in southern New York and northern New Jersey, and in the next three parts is introduced to a series of typical bird colonies along the Atlantic coast, from Long Island to the Bahamas. Here the author is at his best, for, in connection with his studies of the habits of the Fish Hawk, the Brown Pelican and the Flamingo, he has made some of his most notable contributions to the life histories of birds. Part V contains accounts of special trips in 1906 to

Nebraska in search of the Prairie Hen, to Wyoming for material for illustrating the nesting habits of the Golden Eagle, and to southern Arizona to study the bird life of a cactus desert. 'Bird Studies in California' (Part VI), are based on two visits, one in 1903, with a party of the American Ornithologists' Union, and the other in 1906. In Part VII is given an account of 'Bird Life in Western Canada,' and in Part VIII will be found the author's 'Impressions of English Bird Life,' especially at Selborne, the New Forest, the Farne Islands and Bass Rock.

The illustrations, which include 250 photographs from nature by the author, form one of the most attractive and valuable features of the book. Those of the Fish Hawks, Skimmers, Pelicans and Flamingos easily rank among the best ever made of these birds, while several of those of other birds illustrate habits not generally known.

It may seem ungracious to criticize a book of this kind on account of its omissions, but it is certainly to be regretted that the scope of the volume was not extended to include the author's trips to other parts of the United States and Canada, and to Mexico and Trinidad, instead of confining it to the trips made during the last seven years.

Certain evidences of haste in the make-up of the volume appear in the form of typographical errors and discrepancies in dates, which detract somewhat from the high standard otherwise maintained. These defects, however, are easily corrected, and will probably be eliminated in the next edition. But, after all is said, the author is to be congratulated on having brought together a multitude of interesting observations, and on having made an important contribution to the small list of books of travel by American naturalists.—T. S. P.

The Ornithological Magazines

THE CONDOR.—The January number of 'The Condor' contains several papers on the birds of widely separated regions.

Only two are devoted to the birds of California, while two treat of the birds of Lower California, two of those of Colorado, and one treats of those of Australia. In the opening article, Dr. T. W. Richards, United States Navy, gives some 'Notes on Albatrosses and Other Pelagic Birds in Australian Waters.' The notes cover four species of Albatrosses and one Petrel observed between Melbourne, Victoria, and Albany, Western Australia, from the battleship 'Kansas,' during the recent cruise of the fleet around the world.

The 'Nesting of the Xantus Murrelet, as Observed on Los Coronados Islands, Lower California,' is described by Chester Lamb, who notes that the bird usually nests from April 1 to June 15, lays two eggs nearly as often as one, and deposits its eggs in the dark corner of a cave instead of in a burrow or hole in the ground. Under the title, 'Some Rare Birds and Sets of Eggs from the Cape Region of Lower California,' John E. Thayer contributes brief accounts of the eggs of the Mangrove Warbler (*Dendroica bryanti castaneiceps*), the St. Lucas Swallow (*Tachycineta thalassina brachyptera*), and the Belding Rail (*Rallus beldingi*).

The papers on California birds are: 'Birds of the Big Basin,' by M. S. Ray, illustrated with several text figures,—one of them a remarkably beautiful view of Berry Creek Falls,—and 'Notes on the Habits of *Phainopepla nitens*,' by Harriet Williams Myers.

The two most important articles in this number are the contributions to the ornithology of Colorado, one by Edward R. Warren, containing 'Notes on the Birds of Southwestern Montrose County' (114 species observed in April, 1906 and 1908); and the other by R. B. Rockwell, on 'The History of Colorado Ornithology,' from 1806 to 1908. The latter paper mentions all the important publications on Colorado birds, and is illustrated by two maps,—one showing the routes of the various expeditions and the other the localities in which ornithological investigations of more or less importance have been carried on.—T. S. P.

THE AUK.—The April number begins with a paper on 'The Position of Birds' Feet in Flight,' by Dr. Chas. W. Townsend, and many readers will be surprised to learn that the perching birds alone,—Sparrows, Warblers, Jays, Thrushes, Swallows, etc.,—carry their feet flexed or drawn up against their bodies. All others, such as the water-fowl, the game birds and the birds of prey, stretch out their legs and feet behind them. It is a timely subject and one that should spur every field student to closer observation. Under a title 'The Tagging of Wild Birds as a Means of Studying Their Movements,' Mr. Leon J. Cole asks coöperation in a plan of affixing aluminum bands to the legs of nestlings so that they may be recognized if captured another season or at another place.

Four fine half-tone plates illustrate Dr. J. A. Allen's description of 'The Habitat Groups of North American Birds in the American Museum of Natural History,' and show the great advances that have been made in preparing and arranging birds in museums for exhibition purposes. Among several more or less extensive local lists are 'Notes on the Summer Birds of Northern Georgia,' by Mr. A. H. Howell; 'A List of the Birds of Western South Dakota,' by Mr. S. S. Visser, and 'New Records and Important Range Extensions of Colorado Birds,' by Mr. Merritt Cary. Of like value are brief notes on the birds of Washington and of Labrador by Mr. J. H. Bowles and Dr. C. W. Townsend. Mr. B. S. Bowditch presents 'Ornithological Miscellany from Audubon Wardens.'

Mr. Wm. Brewster, with his old-time activity, contributes several notes and two extended papers. In the one on 'Barrow's Golden-eye in Massachusetts,' it is made evident that the female American Golden-eye is not always distinguishable from Barrow's, although the males of the two species are quite different. In the one on 'Something More about Black Ducks,' we have another of those shiftings about of names that Mr. Brewster felicitously calls "nomenclatural tragedies."—J. D., Jr.

Bird - Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

MIGRATING birds have doubtless been sadly puzzled this spring by weather phenomena which has evidently been the cause of high mortality in their ranks. After an exceptionally early season, which brought many species to us before their average due date, and, indeed, established not a few 'earliest records,' the storm of April 29, and the cold weather that followed, placed a check on the northward movement, deferring the arrival of those species which usually reach us during the first week in May. Then came the warm weather of May 12-16, and with it a wave of birds which fairly flooded the woods.

COMMANDER BENNETT'S graphic account of the disaster which befell the birds migrating over the western Florida Keys on April 14, shows to what perils they are exposed when crossing bodies of water.

THE first young birds seen on the wing this year, near New York City, were European Starlings, which, on May 16, were heard uttering their harsh *churring* food-call and seen begging their parents for food. This species appears to be increasing in numbers even near New York City, where it has been long established, and is also rapidly extending its range. We hope that those of our readers within whose territory the Starling appears this year will send us a note of its occurrence in order that its rate of dispersal may become a matter of record.

THE Editor will also be glad to receive information concerning the nesting of the Marsh Hawk and American Bittern within fifty miles of New York City.

WE, unfortunately, have no means of communicating with future subscribers to BIRD-LORE, but we can, at least, warn all present subscribers to beware of an alleged subscription agent who signs himself "Joseph Cooley." This individual has been operating extensively in New England, where he has obtained numerous subscriptions to BIRD-LORE; but, as he uniformly fails to forward them to our publication office, we do not hear of the transaction until complaint is made by the person imposed upon. To avoid the possibility of being defrauded, we suggest that renewals be made directly to the Macmillan Company at New York or Harrisburg, or through a reliable agency.

THE record of legislative activity, which Mr. Dutcher presents in this issue of BIRD-LORE, reveals how wide a field the Audubon Societies must cover merely in preventing the passage of undesirable legislative measures without making an attempt to add to the ground already won. The success of the millinery interests in defeating the bills introduced at Albany, by Mr. Francis, in behalf of the New York State Audubon Society, was a disappointing exhibition on the part of the opposing legislators to comprehend that, in the final analysis, their own interests are the same as those of their constituents. Just why representatives from agricultural districts should side with feather-dealers, with whom they apparently can have little in sympathy, rather than with the farmers who helped to elect them, it is difficult to comprehend. However, they doubtless will be given another opportunity to place themselves on record on this subject, and in the meantime it is obviously the duty of their constituents to state with emphasis whether they prefer birds as useless attachments to bonnets or as the protectors of our farms and orchards.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by MABEL OSGOOD WRIGHT

Address all communications to the Editor of the School Department, National Association of Audubon Societies, 141 Broadway, New York City

June; the Month of Song and the Nest

APRIL and May are the months of promise; with June comes fulfilment. In April and May we are watching for the return of the birds,—those that we know already and those that we hope to meet,—but when June comes, and the last migrant Blackpoll Warbler has passed on, expectation ceases and we come to the actual, the two very real things at this time in the bird world being the song and the nest.

Of the many things in which the feathered brothers may serve as examples to their human kin, nothing is more notable than the fact that the home is built to the sound of music, and that the emotional is not checked by the practical. However, many more people know our familiar birds as singers than as home-builders, and there is a general feeling, even among those who know something of bird-life, that their existence is a mere pastime, wholly free from care.

A little country girl recently voiced this feeling to me. Vexed at being obliged to help in the annual house-cleaning when she wished to go to the woods for arbutus, she stood pouting, as she gazed longingly out of the door, up the road, where her friends were fast disappearing, and her eyes fell upon a pair of early Robins, apparently playing aerial tag among the apple trees.

"I wish I could change into a bird," she said, "they don't have one bit of trouble housekeeping or cleaning—just fly about and sing and eat, and when they need a home, they gather up some old grass and sticks and sit right down and don't bother."

"Ah," I said, "but that is not all, and they do bother a great deal. They not only choose a site and build their home carefully, each according to the traditions of its family, but they keep them as free as possible from dirt, as a careful mother would her child's nursery. Suppose, instead of standing there growling, you finish your work as quickly as possible, and so earn time this spring to watch a few birds at their house-building.

"Then, when they are through with their homes, you can perhaps handle them and understand how much labor it has taken to make them. Four or five such nests will give you a key to them all, and if you are quiet and watchful, you can find them all here on the farm.

"For a composition nest of glue and sticks bracketed against the wall, crawl into the smokehouse fireplace and look up the wide chimney at the Swifts building there. For pure masonry, you have only to watch the Barn Swallows at work

among the rafters. For a woven nest, knitted in a way to rival grandma's stocking heel, and sway from the branches as the stocking hangs between the needles, there is the Oriole's home on the tip end of the longest elm branch, or the pocket-nest of the Red-eyed Vireo on the apple branch. For a dainty bit of fancy work, the Hummingbird's circle of fern wool thatched with lichen, takes the palm. For carpentry, listen to the Flicker—the big Woodpecker of golden wing linings, black throat crescent and red neck band—as he chisels a hole in a branch he knows to be hollow, and safely beds his family upon the chips inside.

"Then, there is the Chippy, who provides a horse-hair mattress, and many other birds supply their young with feather-beds, while the Robin uses both clay and grass. You will soon find that the birds not only take a great deal of trouble in both housebuilding and housekeeping, but they never complain; though perhaps that is because all bird husbands who have voices never forget to sing to them. Then the little girl promised to look and see for herself; won't you?"
—M. O. W.

Good Work in Schools

RHODE ISLAND.—As soon as our education work is sufficiently organized our committee will plan to order certain lantern slides from your list. Meantime, we are arranging a conference for the teachers of this state, the State superintendents and our own local secretaries, the object being to bring our schools and our society into touch with each other, and to demonstrate practical nature-study equipment, show samples of the latest and most scientific literature and to encourage a discussion of the entire field of teaching nature study.

The conference will be held May 8th, and we hope to arouse real enthusiasm, having good speakers promised for the occasion.

May I ask whether you can send us sample copies of your bulletins or other literature which we can show to teachers at that time? By next year we hope to create sufficient interest to make it possible to place a complete set of your bulletins in every school building and free public library of this state, but at present we have not sufficient money. It may be possible, however, to raise the needed sum in other ways, at least we are making an earnest effort to help the schools.—
ALICE HALL WALTER, *Chairman of Educational Committee, Audubon Society of Rhode Island.*

NORTH DAKOTA.—I wish to increase interest and information among the two hundred teachers and several thousand school children of Richland county in the many varieties of birds which frequent this locality, and the many others which pass through it. You will greatly oblige me if you will send your Educational Leaflets to my address. I will appreciate very highly any further suggestions which you may make.—F. R. BARNES, *Superintendent of Schools, Richland county.*



BOBOLINK

(UPPER FIGURE, MALE; LOWER FIGURE, FEMALE)

Order—PASSERES
Genus—DOLICHONYX

Family—ICTERIDÆ
Species—ORYZIVORUS

THE BOBOLINK

By FRANK M. CHAPMAN

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 38

Often at night, during August and September, and also, but less commonly, in May, we may hear the watchword of the Bobolink as high in the air he flies through the darkness on his journey to or from his winter home. It is only a simple note, repeated at intervals—*tink, tink*—but so unlike the call of any other bird that we can name its author as certainly as though he were singing his inimitable song.

Let us first learn where Bobolink spends the summer, and then follow him on his journey to his winter quarters. Although a bird of eastern rather than of western North America, Bobolink appears to have followed man westward, as grain fields have appeared on the prairies and plains. Today, therefore, Bobolinks are found during the summer from northern New Jersey northward to Nova Scotia and west between the fortieth and fiftieth parallels of latitude to the Rocky mountains; thence, in much smaller numbers, they have been recorded from Wyoming, Nevada, Utah, Idaho, and British Columbia, west, as well as east, of the Cascade mountains.

Where, now, does Bobolink winter? Not with the Red-winged Blackbirds in the South Atlantic and Gulf states, or even in the West Indies or Central America, nor yet in northern South America, but far south of the Amazon in the great campos or prairies of southwestern Brazil and the marshes of La Plata. From British Columbia to Argentina, 6,800 miles in as straight a line as one can lay a ruler on the chart. But, however, it may be with the Crow, "as the Bobolink flies" is not always the straightest line. Let us see, therefore, what route or routes the Bobolink follows.

At once we make an interesting discovery. Whether a Bobolink spends his summer in Massachusetts or British Columbia, he leaves the United States through Florida. If Bobolinks are found in Texas or Mexico, they are merely birds which have lost their way. The port of departure as well as of entry is the Florida peninsula, or, at least, the waters that bound it.

But it may well be asked, why do not the Bobolinks of the western United States migrate southward with other western birds into Mexico over the all-land route?

To which it may be answered, that the Bobolink is not truly a western bird. We have seen that he probably has settled in the far West in only recent years. So, in returning to his winter quarters, he retraces his steps, as it were, going back over the same country through which his ancestors gradually extended

their range westward. Thus the Bobolink gives us an indication of how birds learn to travel regularly, season after season, between their winter and summer resorts. The route is learned little by little, as the birds gradually widen their range, and the birds go back by the way they came. This habit appears to be inherited, to be passed on from generation to generation, and when we remember that birds have been migrating for thousands of years, it gives us some clue to the manner in which such a great journey as the Bobolink's may have been developed.

After leaving Florida, the Bobolink Grand Trunk Line appears to have three branches. One leads to Yucatan and thence southward along the eastern coast of Central America; one crosses over Cuba to Jamaica, and one goes eastward to Porto Rico and thence southward through the Lesser Antilles.

The Jamaica route is apparently the most popular. Gosse, in his 'Birds of Jamaica,' tells us that vast numbers of Bobolinks arrive in that island in October and remain until early November. Fresh from the rice fields of our southern states, they are extremely fat and are known as 'Butter-birds,' many being killed for food.

From Jamaica, Bobolink must cross 400 miles of open sea to reach northern South America,—a journey which he doubtless makes in one night's flight; and, having reached the mainland, he probably follows along the eastern slope of the Andes to the treeless region toward which he has been traveling for at least three months.

Here Bobolink passes the next five months, with no family cares and nothing to do but eat and be merry. He spends, therefore, almost twice as much time in his winter home as in his summer one.

Just when the northward journey is begun, no one seems to know. Probably late in March, for Gosse writes that Bobolinks reach Jamaica in April; about the 26th of that month they arrive in northern Florida, and, during the first week in May, reach their particular meadow or pasture in the Middle and New England states, with as much regularity as though they had traveled eight instead of eight thousand miles since leaving it.

Before we speak of the nest Bobolink has come so far to make, let us learn something of his traveling suits.

When Bobolink comes to us in May, he is wearing his wedding dress of black and buff, and very attractive it is. His wife, however, is quite differently attired in a streaked, sparrow-like costume, as our portrait in colors clearly shows.

After family cares are over, in common with all birds, both Bobolink and his wife shed their now worn plumage, and an entirely new one is grown. With Mrs. Bobolink, this is not unlike the one she has just molted; but Bob himself, in making his change of dress adopts the costume of his wife. Thereafter, they both are known merely as Reedbirds or Ricebirds as they journey southward, or Butterbirds, as we have seen, in Jamaica; and no one may say by dress alone which is Mrs. or which is Mr. Bobolink.

They continue thus to look alike until the following February, when again all the old feathers are shed and new ones grown. Styles do not change in the Bobolink world, and Mrs. Bobolink again takes the streaked dress which she and her ancestors have worn as long as any one knows; but Bob prepares for the season of courtship by donning his suit of black and buff, not at yet, however, fully displayed, but partly concealed, as it were, by a yellowish cloak, which we find is composed of tips to the black feathers. As the summer home is approached, these yellow tips drop off, and, in due time, reveal the jaunty garment below.

The young Bobolinks, whether male or female, wear a plumage resembling that of their mother on leaving the nest, and the males acquire the black and buff plumage the following spring.

Bobolink, however, does not rely only on the charms of his plumage to win him a mate, but woos her also with voice; and such a voice! What Bobolink could resist it? Did there ever issue from throat of bird so eloquent an expression of the season's joys? Lowell must have felt this when he wrote

“The Bobolink has come, and like the soul
Of a sweet season, vocal in a bird,
Gurgles in ecstasy we know not what
Save June! Dear June! Now God be praised for June.”

But if this be said of the song of one Bobolink, what shall we say when hundreds sing together, as they do in the South in the spring, clustering in the trees like Red-winged Blackbirds in March, and producing a chorus to which even the poets could not do justice.

Soon after arriving, nest-building begins. The nest is a simple affair of grasses placed on the ground in a slight depression where the rim is even with the surrounding surface. The four to seven eggs are grayish, with numerous irregular spots and blotches of brown. The birds are careful not to betray the location of their home. The male does not sing too near it, and the female does not leave or return to it directly, but goes a short distance through the grass.

At this season of the year, the Bobolink is a most desirable citizen from every point of view. He pleases the eye, charms the ear, and wins our approval through his destruction of noxious insects. Grasshoppers, caterpillars, army worms, weevils, are all on the Bobolink's bill-of-fare while nesting; and, if our estimate of the bird's economic value were to be based on its food habits of this season alone, one might declare the Bobolink to be as useful as he is beautiful. But, unfortunately, there is a debit side to his account with man, which is said to overbalance the items to his credit.

Whatever may have been his habits before man appeared, certain it is that now, with unfailing regularity, as a Ricebird, he visits in vast numbers the rice fields of our southern states in late August and September. The rice is now in the milky stage and the birds devour great quantities of it. So great, in-

deed, is the damage done that it more than offsets the good accomplished by the bird during the summer.

Possibly therefore, on broad, economic principles, the Bobolink should be condemned on the ground that it is more injurious than beneficial to the material interests of man. The rice-growers of our southern states would no doubt welcome this verdict with enthusiasm, but we imagine that, if sentence should actually be passed, Bobolink's friends at the North would gladly raise a sufficient sum to purchase the freedom of this minstrel of our June meadows.

But lovers of the Bobolink should not wait for so great a crisis. If the bird's western range is increasing, its eastern one is as surely decreasing. Thirty years ago it was an abundant summer resident in northern New Jersey and in the region about New York City, where now it is either entirely absent or rare and local. Trapping in the nesting season and shooting in the fall are possibly in part responsible for this decrease. The trapping has been stopped, and certainly we now have reached a stage in our appreciation of birds when we should no longer rank song birds as game.

Questions for Teachers and Students

Trace on the map the area in which Bobolinks are found during the summer. Why have they extended their range westward? Where does the Bobolink spend the winter? What routes does it follow in migrating between its winter and summer homes? Why does it leave the United States by way of Florida? Does it migrate chiefly by day or by night? What is its call-note when migrating? Describe the plumages of the male and female Bobolink. What plumage does the male wear in the fall and winter? What is the Bobolink called in the fall? When does it migrate in the spring? Where is its nest placed? Describe its eggs? What are the feeding habits of the Bobolink? Is it beneficial or injurious?

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 141 Broadway, New York City

Notice

Members of the National Association of Audubon Societies are requested to send notice of any change in address to 141 Broadway, in order to insure receipt of BIRD-LORE. Second-class mail matter will not be forwarded by postmasters unless additional postage is paid. To obviate this, BIRD-LORE will be sent to summer addresses when they are furnished by members.

Legislation in New York

NEW YORK.—The legislature adjourned late in April without taking action on the Francis Plumage Bill (Assembly No. 65), preliminary reports of which were given in the February and April numbers of BIRD-LORE. The history of this bill is an excellent commentary on the present condition of politics in New York State.

The bill in question was an economic measure of the greatest importance to the agricultural and forestry interests of the state. It had the backing of representative organizations, as well as of the press and the great mass of the citizens, and yet it was impossible, notwithstanding that every legitimate effort was made, to get this bill out of committee, owing to the political pressure that was brought to prevent the bill being acted upon.

The chairman of the Law Committee of the Audubon Society of New York made four visits to Albany, appearing before the Fish and Game Committee, to which the bill had been referred; he also urged the members of said committee individually to act upon the bill, but without any results whatever. In addition, thousands of copies of a circular explain-

ing the bill and with strong endorsements, were sent broadcast throughout the state.

Readers of BIRD-LORE are familiar with the text of the circular, therefore it is unnecessary to repeat it here; but the weakness in numbers of the opposition to this bill, which was the wholesale millinery trade, was shown in the circular. The feather dealers were astute enough to employ a lawyer who had great influence with the dominant political party, and this influence was presumably used to prevent any open consideration of the bill on the floor of either branch of the legislature.

After the first hearing on the bill in March, a vote was taken in the Assembly Fish and Game Committee. This committee consisted of thirteen members, three of whom were not present; six of the members voted to advance the bill and four, including the chairman, voted against its advancement. As the bill did not have a majority vote of the entire committee, namely seven, it could not be advanced, and thereafter no vote was taken upon it, and no subsequent effort was successful in having it advanced.

Assemblyman William B. Reed, of Cayuga county, previously had introduced a bill amending section 98 of the law, as follows:

"Feathers or plumage commonly known as aigrettes, or the feathers or plumage of any species of the Heron family, whether obtained within or without the state, shall not be bought, sold, offered or exposed for sale at any time."

The Audubon Society was heartily in favor of the passage of this bill, although it covered only one family of birds instead of all of the birds of the state, as the Francis Bill did. Mr. Reed was a member of the

Fish and Game Committee, and out of consideration for his membership, his bill was advanced and, on April 15, was on the Assembly calendar for passage. With Mr. Reed's consent, Mr. Francis offered amendments, which were adopted. These amendments made the Reed Bill virtually the Francis Plumage Bill, better known in the Assembly as the Audubon Bill. When this fact was recognized by the leaders of the Assembly, Mr. Phillips, of Allegany county, moved a reconsideration of the vote, by which the amendments were adopted. This motion was carried. Again Mr. Francis offered his amendments, which motion, on a rising vote, was declared defeated; the vote announced by the clerk being 39 to 41. Mr. Francis challenged the accuracy of the count, and the Chair, Mr. Hammond, of Onondaga county, sustained the clerk. Mr. Francis appealed from the Chair's decision, but was defeated by a vote of 85 to 2,—fear of the Rules Committee whipping the members into line. "Just to show Mr. Francis how badly he is defeated," Mr. Merritt, leader of the majority, moved to reconsider the vote by which the amendments were lost. A roll-call was taken with the following result:

AYES, 42

Member	Politics	District	County
Mr. Barden	Rep.		Yates
Mr. Bates	Rep.	29	New York
Mr. Bennett	Rep.	15	New York
Mr. G. W. Brown	Rep.	4	Kings
Mr. Callan	Rep.		Columbia
Mr. Caughlan	Dem.	1	New York
Mr. Cheney	Rep.		Cattaraugus
Mr. Colne	Rep.	11	Kings
Mr. Costello	Dem.	5	Erie
Mr. Donnelly	Dem.	13	Kings
Mr. Edwards	Rep.	3	Oneida
Mr. Farrar	Rep.	17	Kings
Mr. Foley	Dem.	12	New York
Mr. Francis	Rep.	23	New York
Mr. Gillen	Dem.	2	Kings
Mr. Goldberg	Dem.	18	New York
Mr. Goodspeed	Rep.	1	Kings
Mr. Hawley	Rep.		Franklin
Mr. Jackson	Dem.	4	Erie
Mr. Lanahan	Dem.		Richmond
Mr. Leffingwell	Dem.		Schuyler
Mr. Lowman	Rep.		Chemung
Mr. Lupton	Rep.	1	Suffolk
Mr. MacGregor	Rep.	8	Erie
Mr. Marlatt	Rep.	2	Steuben
Mr. Martin	Rep.		Seneca
Mr. McElligott	Dem.	7	New York
Mr. McFarlane	Rep.		Wyoming

Member	Politics	District	County
Mr. Mead	Rep.	4	Westchester
Mr. Odell	Rep.		Rockland
Mr. Oliver	Dem.	3	New York
Mr. O'Neil	Dem.	3	Kings
Mr. Partridge	Dem.		Fulton and Hamilton
Mr. Shea	Rep.		Essex
Mr. Sheridan	Dem.	35	New York
Mr. Sullivan	Rep.	2	Chautauqua
Mr. Toombs	Rep.	17	New York
Mr. Weaver	Rep.		Clinton
Mr. Weber	Rep.	5	Kings
Mr. Wende	Dem.	7	Erie
Mr. Williams	Rep.		Delaware
Mr. F. L. Young	Rep.	3	Westchester

NOES, 71

Member	Politics	District	County
Mr. Allen	Rep.	1	Chautauqua
Mr. Baumann	Dem.	22	New York
Mr. Baumes	Rep.	1	Orange
Mr. Boshart	Rep.		Lewis
Mr. C. F. Brown	Rep.		Cortland
Mr. Burhyte	Rep.		Madison
Mr. Clarke	Rep.	16	Kings
Mr. Cu villier	Dem.	30	New York
Mr. DeGroot	Rep.	4	Queens
Mr. Eagleton	Dem.	5	New York
Mr. Evans	Dem.	2	Orange
Mr. Fay	Dem.	14	Kings
Mr. Filley	Rep.	1	Rensselaer
Mr. Frisbie	Dem.		Schoharie
Mr. Geoghegan	Dem.	7	Kings
Mr. Gl ore	Rep.	20	Kings
Mr. Green	Rep.	12	Kings
Mr. Hackett	Dem.	9	New York
Mr. Hammond	Rep.	2	Onondaga
Mr. Hemenway	Rep.		Ontario
Mr. Howard	Rep.		Tioga
Mr. Jordan	Dem.	1	Niagara
Mr. Joseph	Dem.	26	New York
Mr. Klein	Dem.	2	Queens
Mr. Lachman	Rep.	22	Kings
Mr. Lansing	Rep.	2	Rensselaer
Mr. Lazarus	Rep.	3	Monroe
Mr. Lee	Rep.	18	Kings
Mr. J. Levy	Dem.	28	New York
Mr. Lowe	Rep.	1	Jefferson
Mr. Marks	Rep.	31	New York
Mr. McCue	Dem.	16	New York
Mr. McGrath	Dem.	20	New York
Mr. McInerney	Rep.	5	Monroe
Mr. McLaughlin	Rep.	1	Onondaga
Mr. Merritt	Rep.	2	St. Lawrence
Mr. Millen	Rep.		Sullivan
Mr. J. L. Miller	Rep.	1	Steuben
Mr. W. G. Miller	Rep.		Nassau
Mr. F. J. Murphy	Rep.		Orleans
Mr. Neupert	Dem.	3	Erie
Mr. Nolan	Rep.	2	Albany
Mr. F. B. Parker	Rep.		Genesee
Mr. J. S. Parker	Rep.		Washington
Mr. C. W. Phillips	Rep.	4	Monroe
Mr. J. S. Phillips	Rep.		Allegany
Mr. Robinson	Rep.	27	New York
Mr. Rozan	Dem.	6	Erie
Mr. Sanner	Dem.	19	Kings
Mr. Sargent	Rep.	23	Kings
Mr. Schmidt	Dem.	33	New York
Mr. Scott	Rep.		Chenango
Mr. A. E. Smith	Dem.	2	New York
Mr. C. Smith	Rep.		Otsego
Mr. F. L. Smith	Rep.		Oswego

Member	Politics	District	County
Mr. M. Smith	Rep.	1	Dutchess
Mr. Staley	Rep.		Montgomery
Mr. Surpless	Rep.	6	Kings
Mr. Thompson	Rep.	2	Suffolk
Mr. Travis	Rep.	2	Dutchess
Mr. Voss	Rep.	9	Kings
Mr. Waddell	Rep.		Warren
Mr. Ward	Rep.	25	New York
Mr. Waters	Rep.	3	Albany
Mr. L. H. White	Dem.		Schenectady
Mr. Whitley	Rep.	2	Monroe
Mr. Whitney	Rep.		Saratoga
Mr. Wood	Rep.	2	Jefferson
Mr. Yale	Rep.		Putnam
Mr. E. Young	Rep.	2	Ulster
Mr. Wadsworth	Rep.		Livingston

NOT VOTING, 35

Member	Politics	District	County
Mr. Bohan	Dem.	11	New York
Mr. Brady	Rep.		Greene
Mr. Brennan	Dem.	24	New York
Mr. Conklin	Rep.	21	New York
Mr. Draper	Rep.	2	Niagara
Mr. Duell	Rep.	2	Westchester
Mr. Fellows	Rep.		Herkimer
Mr. Fowler	Rep.	1	Ulster
Mr. Garbe	Dem.	3	Queens
Mr. Gluck	Dem.	21	Kings
Mr. Graubard	Dem.	8	New York
Mr. Gray	Rep.	1	St. Lawrence
Mr. Gunderman	Rep.		Tompkins
Mr. Haines	Rep.	1	Westchester
Mr. Hann	Rep.		Wayne
Mr. Herrick	Dem.	14	New York
Mr. Hoey	Dem.	13	New York
Mr. A. J. Levy	Dem.	4	New York
Mr. Lewis	Rep.	2	Oneida
Mr. Manley	Dem.	1	Oneida
Mr. McKeon	Dem.	8	Kings
Mr. C. F. Murphy	Rep.	10	Kings
Mr. Murray	Rep.	19	New York
Mr. Perkins	Rep.		Broome
Mr. Reed	Rep.		Cayuga
Mr. Schutta	Dem.	15	Kings
Mr. Silbermann	Dem.	32	New York
Mr. Spielberg	Dem.	10	New York
Mr. Stein	Dem.	34	New York
Mr. Stern	Dem.	6	New York
Mr. Thorn	Rep.	9	Erie
Mr. Todd	Dem.	1	Queens
Mr. Walters	Rep.	3	Onondaga
Mr. Weimert	Rep.	1	Erie
Mr. E. H. White	Rep.	1	Monroe

Speaker Wadsworth was on the floor at the time, and stood with those (39 to 41) who voted to defeat the amendments. His attitude was one of the chief instruments tending to defeat Mr. Francis' second motion for the adoption of the amendments.

About two weeks before the adjournment of the legislature, the Audubon Bill went into the hands of the Rules Committee,—Mr. Wadsworth, Speaker, of Livingston county; Mr. Merritt, of St. Lawrence county; Mr. Phillips, of Alle-

gany county; Mr. Robinson, of 27th District, New York county; Mr. Frisbie, of Schoharie county; Mr. Oliver, of 3rd District, New York county.¹

The Audubon Society feels perfectly justified in believing that five members of the Rules Committee were opposed to the Francis Bill, because it will be noticed that in the test vote on the amendments to the Reed Bill, the only member of the Rules Committee that voted in favor of the Francis amendments was the Hon. Mr. Oliver, of the 3rd New York District. This gentleman deserves special credit for the high civic stand he took in this matter, inasmuch as he did not let politics influence him to defeat an important economic measure that was introduced for the best interests of the entire citizenship of the state.

In this connection, the Audubon Society desires to thank, and does thank most heartily the members who voted for the substitution. They were acting for the best interests of their constituents, and were on a plane above being influenced by political pressure.

The members who voted against the Francis Bill, the Audubon Society charges with acting contrary to the best interests of their constituents as well as the best interests of the state at large; the members who did not vote at all, if they were present, were not courageous. A representative should always have the courage of his convictions, either for or against a measure.

The Francis Bill, not having passed the Assembly, did not reach the Senate, and, consequently, we have no knowledge of what the attitude of that body would have been; however, it is probable the same political influence that was brought to bear upon the members of the Fish and Game Committee, the Rules Committee, and the Assembly itself, would have been used in the Senate chamber.

The fight on the Francis Bill is now history. The efforts of the Audubon Society to stop the traffic in wild birds' plumage, irrespective of where the plumage came from, whether within or without the

state, have met with defeat, not in an open and manly combat, but by the use of political influences. The action of the majority of the present Assembly legalizes, for another year, the traffic by the milliners in property that belongs to the state, property that is absolutely essential for successful agriculture and forestry.

According to the census of 1900, there were in New York State 226,720 farms, with an acreage of 22,648,129, of which 68.9 per cent was under cultivation; the balance, 7,048,123 acres, is probably largely forest growth. The total value of the cultivated farm and forest lands, without buildings, is \$551,174,220. The value of the products for one year (1899) is given as \$245,270,600. These tremendous interests were ignored by the majority of the Assembly in favor of the millinery dealers, whose combined capital in New York State only amounts to \$11,805,903 (census 1900). Legislation of this character is a menace to the State. The Commonwealth itself owns over 1,500,000 acres of land devoted to forests, and the Audubon Society believes that the Forest Commission is not doing its full duty if it does not insist upon proper legal protection for the birds which are essential for the preservation of the trees. The voters of the state at the next election should insist that all legislative candidates must define their position in respect to bird-protection. A representative who will not legislate to protect such vast interests as those outlined above is not worthy of the suffrages of his constituents.

SPRING WILD FOWL SHOOTING.—The usual annual attempt was made in the New York Legislature this year to repeal the anti-spring shooting wild fowl law, better known as the Brown Law. Unfortunately, the chairman of the Assembly Committee was from the First Suffolk District, Long Island. Notwithstanding all the protests of the Audubon Society, as well as of all decent sportsmen, Chairman Lupton railroaded the bill through his committee without giving any hearing upon it. Fortunately, the bill was defeated. A similar bill to permit spring shooting

on Cayuga and Seneca lakes was also defeated.

ASSEMBLYMAN JAMES A. FRANCIS.—The Audubon Society of New York State, as well as all other organizations that are interested in the preservation of birds and game, not only in this commonwealth, but throughout the country at large, are under the deepest obligations to Assemblyman Francis for the splendid fight he made to pass Assembly Bill No. 65, known as the Audubon Bill. Mr. Francis used every possible legitimate effort to pass this bill, and, under ordinary circumstances, would have been successful; but, the extraordinary conditions prevailing in Albany during the last session, made it impossible. However, Assemblyman Francis is entitled to the same credit and thanks that would have been given him had the Audubon Bill become a law, and they are hereby extended to him. Such high civic work as his deserves prompt recognition, and the Audubon Society certainly hopes that Assemblyman Francis will be in Albany at the next session of the legislature, in order to continue the fight for bird preservation which has only just begun. —WILLIAM DUTCHER.

Legislation in New England

The number of bills adverse to bird-protection that have been introduced into the legislative assemblies of New England during the sessions just closed, or soon to close, exceeds that of any year within my experience. It would be impossible even to list the bills relating to the subject in the space allotted to this report.

Evidently, the destructionists are trying hard to regain their lost ground. But, in the main, their efforts have been defeated, and progress in bird-protection has been made.

VERMONT.—The Committee on Fisheries and Game selected from the Vermont Assembly, which met in the fall of 1908, proved to be generally in accord with the spirit of bird- and game-protection. The Senate Chairman of the committee, Hon. Edward Orvis, had much influence and

the committee wisely reported against most of the pernicious legislation that was referred to them; nevertheless, a bill to allow fruit-growers to kill cedar birds, passed the house; but your agent went to Montpelier at this juncture, and the bill was killed in the senate.

A bill was passed to establish a closed season of five years on the Bartramian Sandpiper, or Upland Plover. All the efforts of the friends of the birds were directed to the attempt to pass a bill for the registration of resident hunters, which was finally enacted, although so amended that it will probably produce only one-half the revenue for bird-protection that it might have furnished if passed as originally drawn.

Game Commissioner Thomas and President Carlton D. Howe of the Vermont Audubon Society, deserve great credit for their courageous fight to secure the passage of this bill.

NEW HAMPSHIRE.—Here practically all adverse legislation was killed in committee, largely through the efforts of Game Commissioner Nathaniel Wentworth. The great effort of the year was made to secure the passage and enactment of the bill for the registration of resident hunters, and your agent exerted all possible influence in its favor.

Here, again, Commissioner Wentworth did splendid work. The bill was stoutly opposed, but finally passed both houses by a large majority, and, after due consideration, was signed by the Governor.

MASSACHUSETTS.—Here, again, many vicious bills were introduced, and most of them have been defeated, although a few are still pending. Among those defeated were:

(1) An attempt to take the enforcement of the law from the hands of the Fish and Game Commission.

(2) A bill to establish an open season on Gulls.

(3) A bill to permit shooting on lands of the Metropolitan Water Board.

(4) A bill to permit the killing of Ducks, Gulls, and other water fowl on reservoirs of the Metropolitan Water Board.

(5) A bill to repeal the law for the registration of hunters, passed in 1908.

Also many other bills, extending the open season for game birds, etc. Others are still pending. The effort to stop spring shooting, which was defeated in 1908, was renewed this year with added strength.

Two bills, drawn by your agent, were introduced by Representative Gates, of Westboro. The first prohibited the killing and sale of shore birds from January 1 until August 15, annually, and established a perpetual closed season on the Killdeer and Piping Plover. The other protected Swans at all times and seasons, and fixed the closed season on Wild Ducks, Geese and Brant from January 1 to September 15. Both these bills were vigorously opposed from the beginning, and were reported adversely by the Committee on Fisheries and Game; nevertheless, they have passed both houses.

The shore-bird bill is now in a conference committee because of a disagreement on an amendment, and the wild-fowl bill has not reached the Governor, as this goes to the printer. Much credit for the success thus far attained should be given to Representatives White, of Brookline, and Gates, of Westboro, to Mr. E. N. Goding, a sportsman whose assistance has been invaluable, and to the many members of the National Association and the Massachusetts Audubon Society, who have worked loyally for the cause.

Dr. G. W. Field, a director of the Massachusetts Audubon Society, has left no stone unturned. General Morris Schaff, Mr. Wm. R. Sears, Mr. Edward L. Parker, and scores of other sportsmen, have not spared themselves in this work. Former Attorney-General Herbert Parker has been prominent among the advocates of the prohibition of spring shooting.

RHODE ISLAND.—No adverse legislation was passed. The hunters' registration or license bill was enacted and approved, after a long, stubborn and tedious fight. Lobbying against this bill went on practically every day while it was pending. Notwithstanding this stubborn opposition, it was passed by a large majority in both

houses, although for a time success seemed unlikely.

Great credit is due to advanced sportsmen, the officers of the State Grange, Patrons of Husbandry, the State Board of Agriculture, and the State Audubon Society for the work done for the bill. Mr. John J. Dunn, Secretary of the State Board of Agriculture, and Representative George Phillips, of Greene, were particularly active, and the attitude of the Bird Commissioners of Rhode Island had great weight.

Your agent drew an anti-spring shooting bill, which was introduced and reported favorably, but it was laid over by agreement, and, pending the passage of the hunters' registration bill, it was re-committed to the committee and remained unenacted at the close of the session. A bill to establish a closed season of several years on all birds and game was referred to a committee, but not reported.

CONNECTICUT.—A mass of adverse legislation has been introduced in Connecticut, but, thus far, no bad bills have passed.

Five bills to amend the present excellent law for the protection of wild fowl and shore birds were introduced. Four of these have been killed by the Committee on Fisheries and Game, and one has been tabled. It is expected that a strong fight will be made to pass it.

A bill to prohibit shooting from power boats has passed the Senate, but has not yet passed the House, and its fate is uncertain.

A bill providing for a closed season of ten years for the Wood Duck has become a law.

It is impossible, within the limits allotted to this letter, to give details of legislative work in Maine. These, and the result of matters now pending in Massachusetts and Connecticut, will be given later.—E. H. FORBUSH.

Legislation in Other States

SOUTH CAROLINA.—Bills for amending the game laws and providing protection

for certain birds now unprotected had favorable consideration on the part of the committees from the House and Senate, and a poll of both houses indicates that these bills will pass without serious opposition. The legislature had so much important work to do at the session just closed that it was unable to reach our bills on the calendar, but they are set among the first for consideration when the legislature convenes in January, 1910.

MISSOURI.—Four years ago, the Forty-third General Assembly passed a law providing for the protection of game and fish, and establishing a system of game wardens for the enforcement of this law. This wise and beneficent law, one of the best in existence in the United States, was repealed in 1907 through the efforts of those who were opposed to the law on selfish grounds.

At the present session of the legislature, a bill, practically identical with the one passed in 1905, known as the Walmsley Law, was introduced, and Governor Herbert S. Hadley considered prompt and favorable action on this bill of such great importance that he issued a special message to the Forty-fifth General Assembly. Among other statements, the Governor said "that Quail and other game had been slaughtered in large numbers throughout the state, and sold upon the markets of the large cities through game dealers regularly engaged in this business." He also made the following very pertinent and forcible statement:

"The value of birds to the agriculturist and the horticulturist is no longer a matter of speculation. Without the aid of birds, the production of harvests of grain and yields of fruit would, in a short time, become difficult, if not impossible. The existence of the insects which accomplish these losses can be largely avoided by the prevention, through a proper game law, of the destruction of the birds which make the existence of these insects in large numbers impossible."

Happily, Governor Hadley's strong presentation of the case of the birds had the desired effect, and the bill became a

law and is now in force. The law, among other things, prevents the sale of game, limits the bag, and shortens many seasons.

The plumage section is exceptionally strong, as it covers possession and sale, irrespective of whether said bird was captured or killed within or without the state. This will effectually prevent the sale of aigrettes. It also provides for a Game Commission to be supported by resident, non-resident and alien license fees. This new law is one of the best in force in any part of the country.

It is especially pleasing to this Association to have the chief magistrate of a commonwealth take such a decided stand for bird- and game-protection as that taken by Governor Hadley.

WISCONSIN.—An attempt was made to repeal the anti-spring shooting wild-fowl law, but the bill was killed in the Assembly by a vote of 46 to 40. This victory was obtained only after a most strenuous fight; it was probably one of the hardest legislative battles that has occurred during the present year. The history of this fight is too long to record in BIRD-LORE, but it is only necessary to say that the fight for the repeal was not made by the best class of sportsmen.

The Speaker of the Assembly, Hon. L. H. Bancroft, and Assemblymen C. H. Dorner and William M. Bray, were a tower of strength in opposition to the repeal bill, and it was very largely due to their determined opposition that the bill was defeated. The high stand of civic work of such legislators deserves the grateful acknowledgment of all bird-lovers.

MINNESOTA.—The following game-preserve bill was signed by the Governor on April 13:

"SECTION 1. No person shall kill, or pursue with intent to kill, take, snare, or have in possession, by any means, upon the Minnesota state forest reserve lands or parks, *national forest lands, or upon any lands that may be designated by the State Game and Fish Commission as game-propagating and breeding-grounds*, any wild animals or birds protected at any

time by law. The killing or *having in possession of each such protected* animal or bird shall constitute a separate offense.

"Provided, that this act shall not prohibit the *killing* or destroying of wolves or other noxious animals by or under the *supervision of the State Game and Fish Commission* or the State Forestry Board."

The new Superior National Forest in the northern part of the state, established February 13, 1909, alone contains nearly a million acres, which will make it one of the largest game preserves in the United States. This Minnesota bill is one of the most important advances made in game-protection this year.

OKLAHOMA.—After a two years' fight, this state now has a most excellent game and bird law, which was approved by Governor C. N. Haskell, March 8. Among other things, it provides that all wild animals and wild birds, resident or migratory, belong to the state; it defines game birds and non-game birds; it prohibits sale, and transportation out of the state; it makes common carriers liable for transportation; it protects the nests and eggs of any kind of wild birds, and prohibits snaring and trapping as well as other illegal methods of capturing game; it limits the bag and makes reasonably satisfactory seasons; its plumage clause is very strong, covering foreign birds; it establishes a license system, resident \$1.25, non-resident \$15, alien \$25. Licenses must be carried on the person while hunting, and must be shown on demand to any citizen. It establishes a game commission, the expenses of which are to be paid from the game-protection fund; it compels a biennial report.

The passage of this bill is a strong advance movement in Oklahoma, and places this young state well in the advance in bird- and game-protection.

CALIFORNIA.—An amended law for the protection of the wild birds, other than game birds, was enacted at the legislative session of 1909, and has been approved by the Governor. This law provides that "every person in the State of California who shall at any time kill or catch, or

have in his possession, living or dead, any wild bird other than a game bird, or who shall purchase, offer or expose for sale, transport or ship within or out of the state, any such wild bird after it has been killed or caught, except as permitted by this act, shall be guilty of a misdemeanor.

"No part of the plumage, skin or body of any bird protected by this section shall be sold or had in possession for sale, irrespective of whether said bird was captured or killed within or without the state."

This law will be in effect on and after June 17, 1909.

The Audubon Society of California has already warned milliners against selling, or having in possession for sale, any part of the plumage of the American Egret, or the Snowy Heron, plumes commonly known as "aigrettes," or any wings, plumes or other parts of Grebes, Pelicans, Terns, Gulls, Ibis, or other native or migrant birds protected by this law.

Good Results of the Anti-Spring-Shooting Law in New York

There are still (May 4) three Buffle-head Ducks in the bay. This is a remarkable record. They seem to be content,—perfect freedom of the bay and absolute protection seem to have altered the usual migration season of these birds. If the present law is kept in force, I expect to see a noticeable increase in these wild fowl in the next two years. A few years ago, I thought these birds were doomed; they appeared to be almost gone. However, during the past two years, I have seen more than in the previous ten years. No shooting in January, February and March on Long Island is the cause of this great increase. The law was a wise measure, and it was secured just in the nick of time to save a grand species of Duck from the fate of the Wood Duck.

Let shooting be allowed during January and February, and, in two or three years, these Buffle-head Ducks will not only be reduced to where they were three years ago, but will be entirely wiped out.

I am absolutely sure of this from past experience, and from the habits of the fowl that are right before my eyes every day of their four months' sojourn here.

There are twenty-two fine Mergansers on the bay today, and several pairs of Black Ducks in the marshes. I am hoping the latter will breed here. More records of the Mallard have been made this spring, since March 1, than any year since I have been keeping bird records.

Migration is now well under way, and the woods are full of Warblers. One wants to stay right there and forget the troubles of the common everyday affairs.

—ROY LATHAM, *Orient Point, Long Island, N. Y.*

Extracts from the Second Annual Report of the Bird Protection Committee of the Forest and Field Club of Belmont, Massachusetts

We are able to report another very successful year. A citizen of Belmont who owns 150 acres of land has also had it posted with signs forbidding shooting and trapping.

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Vol. XI

JULY—AUGUST, 1909

No. 4

A Cowbird's Nursery

By CLINTON G. ABBOTT



CHESTNUT-SIDE ON NEST

“WHERE ignorance is bliss, 'tis folly to be wise”—and, to judge by the serenity of her expression, the little Chestnut-sided Warbler in our picture has not the least suspicion that the three eggs which she is brooding so happily are not all of her own laying. Who knows but that it may even be to her a source of pride that two of them are considerably larger than the third, giving promise as they do of babies twice as lusty as those of her neighbors! As a matter of fact, it is the work of the lazy Cowbird. When the rightful owner of the nest has been absent, no less than two eggs of this shiftless vagrant have been imposed upon her for incubation and care. Whether both were laid by the same bird I could not of course determine; but the fact that the eggs were quite differently marked would indicate perhaps that two Cowbirds had visited the nest.

As a general thing, I have no qualms of conscience whatsoever in destroying every Cowbird's egg that I find. For although the Cowbird in itself is a harmless bird, its advent into the world seems necessarily to be attended by the sacrifice of other birds at least as harmless and usually more attractive. But in the case of the Chestnut-sided Warbler's nest an unusual problem presented itself. Here were two Cowbird's eggs and only one Warbler's. Had I removed both Cowbird's, the bird would almost certainly have deserted her home. So, as the nest was in a convenient situation for observation—in a bush alongside a path, and

close to the house where I was staying—and as I was curious to watch happenings in the little cradle when the heterogeneous family should be born, I left the eggs untouched.

The nest was found at Rhinebeck, N. Y., on July 6, 1900, incubation having apparently just started. Four days later I discovered that one of the Cowbird's eggs was infertile; so I removed it from the nest, disappointed that I should not, after all, enjoy the somewhat unique experience of observing two young Cowbirds growing up in the same nest. It was sometime during the night of July 13-14 that the first of the remaining two eggs hatched—the Cowbird's of course.



NEST OF CHESTNUT-SIDE CONTAINING TWO EGGS OF THE COWBIRD
AND ONE OF THE CHESTNUT-SIDE

The Warbler's hatched between 12 and 12.30 on the 14th. The nicety with which matters had been so arranged that the young Cowbird would have just a convenient start in life over its unfortunate rival commanded at least my admiration if not my sympathy. Cowbirds must indeed be sharp nest-finders to be able to discover at short notice not only the nests of certain suitable kinds of birds, but even nests containing eggs at a certain stage of incubation!

After the hatching of the eggs I spent considerable time at the nest-side, and observed with interest the many pretty little incidents of a bird's domestic life—the constant and tender brooding of the newly hatched young by both Warblers in turn; the never-ceasing search among the neighboring trees and bushes for small caterpillars; the delivery of the food by the male to the brooding female,

who in turn would raise herself and pass it to the young; the careful cleansing of the nest; and many other intimate details of the birds' loving and happy lives. When I drew aside the leaves that sheltered the nest and allowed the sun to shine upon it for purposes of photography, the mother, realizing with that wonderful instinct common to all birds which nest in the shade, the fatal effect on her babies of the sun's direct rays, would take her stand on the edge of the nest and with outstretched wings would form of her own body a living shield for the comfort and protection of her young. Although herself in evident distress from the heat, and with parted mandibles continually gasping for air, she would remain in this position as long as the sun shone upon her, only stepping aside occasionally when a well-known signal announced that her husband had arrived with a meal for the little ones. It was a beautiful picture of parental devotion.



FEMALE CHESTNUT-SIDE SHIELDING YOUNG
FROM SUN

As the young birds began to grow, the Cowbird not only maintained but rapidly increased its lead over its small nest-mate. At every visit of the parent bird with food, its capacious gullet could be seen violently waving aloft and almost completely hiding the feeble little mouth of the Warbler, whose owner was pathetically doing his best in a dumb appeal for food. The Cowbird's appetite seemed never to be satiated and, unlike most nestlings, which relapse after a meal and give their brethren the next chance, he seemed ready for every fresh opportunity; and by reason of his superior display he usually succeeded in obtaining the coveted morsel. However, the young Warbler did manage to get an occasional portion, and I had strong hopes that he might reach maturity. For I realized that a Chestnut-sided Warbler's usual laying is about five eggs, and that therefore some four eggs must have been made to give place to the two Cowbird's. Hence the young Cowbird in the nest might reasonably be granted the room and food of four young Warblers. More than this I hoped he was not getting.



YOUNG CHESTNUT-SIDED WARBLER AND YOUNG COWBIRD AT AGE OF FOUR AND ONE-HALF DAYS

An idea of the disparity in size of the two nestlings may be gained from the accompanying photograph, which was taken at 3.30 P. M. on July 18, or when the birds were about four and a half days old. I replaced them in the nest, but that was the last I saw of the poor little Warbler. When I returned at 5 P.M. the Cowbird was in sole and triumphant possession of the nest. Just what became



CHESTNUT-SIDE FEEDING YOUNG COWBIRD ON NEST

of the Chestnut-sided Warbler will never be known, but my theory is that weakened by lack of sufficient food the little fellow at last became too feeble to raise himself at all and was crushed to death by the Cowbird's gross body. The parent birds, returning and finding the little corpse in the bottom of the nest were no doubt impelled by their instinctive sense of cleanliness to carry it to a distance; for the most careful search over a large area beneath the nest failed to reveal any sign of the missing bird, thus proving that it had not fallen from the nest nor been forced out by the Cowbird.

The Cowbird now had things all his own way and, there being no one to dispute his right to all the food, he grew with amazing rapidity. The dainty little cup of a nest, never built to accommodate such a monster,

was soon completely forced out of shape. His body then protruded beyond the lower rim of the nest and the ground underneath became littered with droppings, quite baffling the cleanly, sanitary instincts of the Warblers.

Our last photograph represents the Cowbird, now almost twice as large as his devoted foster-parents, rising with hideous chitterings of delight to receive an ever-acceptable meal. The picture was taken at 7.30 A.M. on July 26. As I walked home to breakfast, I resolved that in the interests of justice I ought to put an end to that Cowbird as a murderer and a menace to the welfare of bird-dom. But when I returned to the spot, about 9 A.M., he had escaped me; the nest was empty, my bird flown. No doubt if I had searched and listened I should have heard him shouting for food not far away, but my spirit of vengeance was only half-hearted at best, and so I left him, a criminal abroad, to be the parent, I suppose, of others as bad.

THE HERMIT THRUSH

In the garden here, as a dreamer may,
I sit and muse on the waning day,
And mingled sweet with the sunset flush,
I hear the song of the Hermit Thrush.

In this seraph mood does he sing to me?
Or his mate, enraptured on yonder tree?
Or does love of life into music rush
From the inmost heart of the Hermit Thrush?

Not now to reason of nature's ways,
But in awe to whisper that joy is praise.
That this halcyon song in the evening hush
Is the prayer to heaven of the Hermit Thrush.

—*Marion Murdock.*



Some Nesting Habits of the Wood Pewee

By AMANDA ELLIOTT, New Castle, Ind.

“THE bird is very watchful, and never lets any one see her on the nest,” I had read of the Wood Pewee, and so was elated to find, on June 24, a nest by seeing the bird fly to it and nestle down.

Then, purposing to learn all that might be possible of a Pewee’s home-keeping, I seated myself where I could best see it, and for two hours watched continuously the nest, probably forty feet above me, in the crotch of a dead branch of a maple, and timed the frequent comings and goings of the bird.

Once in each hour, by looking away I lost the exact moment of the bird’s return, but only that. The Pewee would seem hardly more than quietly settled over her eggs, for she was evidently sitting, than she would glide off and away to a neighboring tree to watch for prey. First from one perch, then from another, she would alertly watch, then with a graceful sweep dart out and seize some insect and return. Flying to her nest, she would usually alight on its edge, though once or twice she was seen to perch first on a near-by twig, then prettily slip down upon the eggs.

There were four flights during the first hour, after an average time of eleven minutes on the nest, the absences averaging four minutes; five flights during the second hour, after an average of ten minutes on nest, the searches for food occupying two minutes each. This was between two and four o’clock in the afternoon.

No sound was made by the bird either on or off the nest, save a sort of snapping sound when on the wing, which sound might be taken to be made by the bill when an insect was captured. I failed, however, to discover the cause.

During these two hours of watching the nest, the male was neither seen nor heard, but at 3.50 o’clock on the next morning, an unusually cool one, his familiar note rang out. *Pe-a-wee, pe-a-wee*, he sang, and morning after morning afterwards I listened to hear him, to find the time at which he began his singing. Whether he really was the second bird to waken, he was the second one each day that I noted, the Robin always singing first.

On this morning of the 25th I discovered, to my great delight, that the nest could easily be seen from my window. At 4.10 A.M. o’clock the bird was on the nest, and again I determined on a long watch. At 4.34 o’clock what I took to be the very first of the day’s flights from the nest was made, but the bird was home again by the time I had jotted down so much. Once during the time of watching—from 4.10 to 6.08 o’clock—I again lost the exact moment of one flight, this time a flight from the nest, but, in all, twelve times the bird went in search of food, the absence from the nest being of shorter duration than in the warmer afternoon—sometimes one minute, sometimes only half as long; again one minute and a half, only once so long as three minutes, and, save for that time, only once so long as two. Two or three times during the two hours the male perched on a twig near the nest.

I wished to know, if I could, to what hour in the evening these frequent and monotonous journeyings from home in search of food might continue. So a third time of watching was set for the later hours of the day—from 6.15 to 7.31 o'clock. I think no flights were made after 7.31 o'clock, the time of the last return noted, though by that time it had grown almost too dark even to distinguish the nest.

Their vision must be sharp, for the prey captured was not always near, and the wonder was that it had been sighted at all. But I think that not even a Pewee's eye could have detected a gnat or fly after 7.31 o'clock on June 25.



WOOD PEWEE ON NEST

Copyright, by L. S. Horton

Photographed by L. S. Horton, at Hyde Park, N. Y.

Ten flights were made between 6.15 and 7.31 o'clock, longer absences being made at times than had been noted before, one being as long as eight minutes and one six minutes long. Once, the flight from the nest was probably made because of the bird's being frightened away by other birds.

The male was neither seen nor heard during this watch, though at times during each day, and frequently, he was both heard and seen.

These watches were worth the while, if for nothing else, to enjoy the pretty picture made by the alert and tiny bird on the compact little nest—just such a picture as is so beautifully shown in the July–August BIRD-LORE for 1904.* Neither bird nor nest was easily distinguishable from the gray bark of the branches, though the two white wing-bars were plain when once one knew that the bird was really there.

During the three days after the 25th the nest was watched at intervals, and

*Here reproduced.—ED.

shown at times to interested friends to whom the Pewee and her nest were unfamiliar. On the evening of the 28th they were pointed out to a small boy who came across the street to see them. Did I thus, probably, rob myself of my pleasure? For, though the bird was seen again on the nest in the early morning of the 29th, and heard at least once during the busy forenoon of that day, she was not seen at any time afterward, though the note of the male was heard at times every day as usual and not far away. The nest was utterly and thus suddenly deserted. I questioned—barring any mishap that may have befallen the bird—could her disappearance have been due to the Pewee's aversion to being watched? Could she have found a more secluded place, possibly, and built there another nest? If not why did the male remain about his accustomed places singing as before?

I thought my opportunity for observing Pewees at an end and that my questions must go altogether unanswered, but, on July 12 and 13, a pair of the birds was again frequently seen, and, thinking it might be the same pair nesting in another place, I began a search for the nest. And on the afternoon of the 14th, I discovered that they were building in a sweet gum tree just at the edge of the porch and on a branch only about twenty feet from the ground. The nest was in plain view from both porch and window, save for a screen of leaves which partially hid it. In the corner of the porch, I found my vantage ground, for thence I could see the nest clearly.

Building was evidently in progress, but it seemed nearing completion, for the bird—I judged that the female alone was the builder—seemed to bring no building materials when flying to the nest, but only smoothed its inner walls with the breast, and with the bill put dainty touches on the outer wall of lichens.

On July 15, the work of building continued, for the bird was seen at least once to bring a blade of dead grass or a pine-needle to put into the walls. About 4 o'clock of that day, a boy espied the Pewee at her work. The bird seemed disturbed by his presence and, flying away, was seen no more that day. It began to seem that the Pewee must have a particular aversion to small boys, and I feared that this nest, too, had been abandoned. But the morning of the 16th found the work again going on. By this time the tiny cup-like nest had appreciably gained in size, and the lichen covering appeared more elaborate than before.

Again and again the bird flew to the nest and smoothed and arranged its materials. These building days appeared a play time, the bird alighting often on its favorite perching places—dead branches of catalpa or of pear—whence to dart out for its prey, or sometimes to sing—if its plaintive note can be called a song—the visits to the nest seeming to be made only for the sake of variety and change.

Never was her call the *pe-a-wee* of the male, but often only a single note and never more than two. Is this always and only the song of the female?

On the 17th the bird was seen and heard as on the days before, only that it

was not seen to approach the nest until the late afternoon at the close of a wind and rain storm,—perhaps to see whether or not all things were still in order, for on the nest she busied herself again in smoothing the inner walls and placing aright the blue-gray lichens.

While watching the feeding habits this day, it occurred to me to ask whether the Pewee feeds only on the smallest insects. Never, at any time, could I see any insect that evidently was seized. In all the time of my observation, I did not see the Pewee pursue moths, as the Kingbird was seen to do, though there were moths to be had for the taking.

On July 19 both birds were seen. Incubation began either on the 19th or 20th, but, since almost no observations were made on the 19th, I could not be sure of the day. On the 20th the song of the male was heard early and frequently for some hours. Often both birds were seen together at the nest. This day was a repetition of the flights and returns to the nest described earlier—until the middle of the afternoon. Then, after all the long, careful work of building and after so short a time from completion, the tragedy came. For, on looking from the window, I saw a robber Blue Jay standing over the nest, deliberately devouring the eggs even to the shell.

Insolent in his attitude, probably because the Pewee was helpless before his greater size, he seemed not to heed the cries of the tiny bird uttered again and again—the cry that I had heard at times before, but only now knew to be the cry of distress.

Another nesting had ended—this time, I knew, in a tragedy; perhaps the other had ended so, for the birds had hardly shown themselves so much averse to being watched as I had thought to find them.

The next morning the Pewee sang and sang again as if nothing had happened; but, then, one may as well sing.

For one moment the bird was on the nest again, on the 21st, and I hoped that the nesting was to continue. Both birds were seen about the tree on the 22nd. A Jay again approaching the nest, the male, presumably, defended it against him, and again I hoped that the nesting might continue and undisturbed. But from that time the nest was abandoned.

After remaining until weather-worn, and ragged, the nest was taken down from the limb. But even weather-worn it is beautiful—a tiny cup of pine-needles covered close with lichens.



The Towhee

By CHAS. E. HEIL, Needham, Mass.

THE Towhee, or Chewink arrives in my neighborhood during the last week in April, or the first week in May, and is a common summer resident. The males arrive before the females—sometimes two or three days, and sometimes a week or more. Along an old roadway near my home, I can generally find one on May Day; here as I walk along I see him scratching among the leaves that lie under the bordering bushes, or, with outspread tail, flying across the road in front of me; now and then he will pause to call *che-wink*, and glance at me with bright eyes. Things of beauty, indeed, are these red, sparkling eyes, in their setting of glossy black, and many times I have admired them. To me, this alert, parti-colored bird is one of the handsomest members of the Finch family; no other is more striking, and I experience great pleasure when I see the first one of the springtime. The birds are not shy on their arrival, and one can approach quite near to them as they scratch among the brown, last year's leaves. I find that a few people still have the impression that Chewinks, and other members of this family, scratch like barnyard fowls. A little observation will show that our domestic birds scratch with one foot at a time, whereas the Chewinks, and their kind, use both simultaneously.

I have found the nest, with its set of four eggs, as early as May 14, so it appears that a few of these birds begin to construct their homes almost immediately after their arrival at the North. The nesting-sites are found in the same overgrown pastures and woody places that attract the Thrashers, and it is not uncommon to find the nests of these two species within a few feet of each other. The Chewink invariably builds on the ground; generally the nest is placed at the foot of a bush or sapling, or under a tuft of grass, and is made of bark, dead leaves, dry grass, and weed-stems, with a lining of fine dry grass. In a pasture in Sharon, Massachusetts, I found one lined with horse-hair and dry grass. The nest when seen on the ground appears strongly made, but, when taken up, is found to be rather flimsy, and loose in construction.

The eggs—generally four—are whitish, spotted with sienna and madder brown, and an occasional bit of lilac. I found two so sparsely and faintly marked that at a distance of a few feet they looked like pure white eggs. The nest and its contents are fine examples of protective coloration, and it takes a sharp pair of eyes to find them. The nesting season begins in early May, and lasts till late July, and undoubtedly two broods are reared by some of the birds. The female is a very close sitter, and the colors that show when she is on the nest—brown and chestnut—blend perfectly with the surroundings. On one or two occasions I have found the male on the eggs, but he did not sit so close as the female. When the nest is discovered, the owners become greatly excited; they seldom approach close to the intruder, but flutter about at a safe distance, calling *che-wink*, *che-wink*, *che-wank*, till the place resounds with the racket, and one is glad to get away from the vicinity. Incubation takes from twelve to thirteen days.



1, 2, 3, 4. Tame Female Towhee. 5, 6. Towhee Poses. 7, 8. Nest and Eggs of Towhee. 9. Towhees, six days old in nest. 10. Towhee about seventeen days old

Photographed by Christina J. Heil

The young birds leave the nest when they are nine or ten days old. At this age the upper parts are a mottled brown; the under parts are whitish, streaked with dark brown or black, and there is a faint chestnut wash on the sides. They soon change this dull dress, however, for the handsome, parti-colored plumage of the adult birds.

The song—a simple melody—is usually whistled when the bird is perched ten or a dozen feet from the ground. Now and then, I hear it from the top of the tallest oak or elm in my neighborhood, and, on two occasions during the past season, I heard it when the bird was on the ground. Ordinarily, the song consists of two parts—the first composed of two notes and the second of a trill—but sometimes the first part consists of three notes, and at times the trill is omitted.

This species feeds on worms, seeds, and insects and their larvæ, and during the summer months they vary their diet by eating blackberries and wild cherries. As I have seen a bird eating an acorn, it appears that nuts are also on their bill of fare. Much of the food is found on the ground, and once I had an opportunity to see a bird while scratching among the dead leaves for a meal, make short flights into the air for passing insects, in true Flycatcher style.

Chewinks are not gregarious, and one seldom sees more than two or three together. Most of them depart for the South during September, but stragglers remain until the end of October, and occasionally one spends the winter in this part of Massachusetts. On December 19, 1906, and again the next day, I saw a solitary individual—a male, apparently in perfect condition—on the border of an old roadway in Needham.



BLACK TERN ON NEST

Photographed by J. M. Schreck, at Edmonton, Alta.

Remarks on the Habits of the Kingfisher on the New Hampshire Seacoast

By HENRY R. CAREY

WHEN the cold east wind from the sea still chills one to the marrow, and the clamorous cries of the Crows are yet borne to the ear with the crispness of passing winter, a moderately large bird, rivaling the Swallow in his flight and bearing the blue of the sky upon his back, sweeps up Sagamore creek, near Portsmouth, New Hampshire, for the first time in many months, rattling as he goes. It is the Kingfisher; he has come as punctually as if driven by clockwork, in this, the first week of April, to spend his summer with us.

Like all fishermen, he is independent by nature. Only the power of love is able to dispel for a time the joy which he finds in his solitary hunting perch. Alone he sits on his distant point of vantage, twisting his keen eye in every direction or turning slowly upon his tiny feet, bowing and clattering softly to himself in his strange tongue. He has no friends; the little birds avoid him. He has few enemies; the Crows and the Hawks leave him severely alone. Fearlessly he harries the small fish up and down over his hunting-grounds; courageously he seeks his prey in the icy salt-water of early spring.

Then, one day, a strange feeling comes upon him. He mounts high into the air and flies hither and thither with no apparent purpose, making as much noise as possible, like an excited fly caught in a warm room. Presently he finds a mate, and he forgets in part his solitary nature. The two go fishing together and sit side by side on the same perch. But, after all, it is more toleration than love which they feel toward each other. They do not feed or caress one another as other birds often do. Each one simply allows the presence of his mate because of the relation existing between them.

As is well known, the same nesting-bank is often chosen year after year, in spite of disasters of every kind which may be connected with it. Since it is not my purpose here to discuss the well-known details of the Kingfisher's life, I shall pass over the various dates of egg-laying, hatching, etc. The food brought to the nest-hole consists of various kinds of small fish. It not infrequently happens that one of these fish is too large to be carried by the parent bird into the narrow passage; it is then dropped upon the bank and is allowed to rot. This fact is often responsible for a large amount of the odor which is apt to hang about the mouth of a Kingfisher's burrow. I once found a common salt-water flounder, four and one-half inches long and proportionately wide, which, being rather unwieldy for the parent bird to handle, had been left in this way. Another time I found a young Sculpin (*Callionymus æneus*) in the same condition, and, yet again, a live minnow, which, in spite of a great patch on its side devoid of scales, was finally freed in perfect health. This fact, by the way, suggests the probable fate of many a hardy small fish which escapes wounded from the Kingfisher's deadly beak.

The young birds leave the earth about July 25. They are a somber-looking lot, as for several days they sit tamely about the wharfs or venture on short, erratic flights, which makes one feel that they have not yet got used to the light after their long imprisonment underground. It is at this time that both parents and young, somewhat crowded in the vicinity of the home nest by their sudden increase in population, begin to seek out new fishing-stubs, or to use old ones for the first time in the year. When the young are able to care for themselves, the old birds leave them and lead once more the single life which they seem to enjoy most.

At this time of year, frequent quarrels occur among them, mostly about the best fishing spots, and now that strange, whining note, which Herrick describes as resembling the grating of two tree boughs in the wind, is often heard. It appears to be a note of anger; I have heard it when one bird, wanting the perch of another, hovered menacingly over him. Once I saw two birds dive simultaneously for the same spot in the water, the same note escaping them as each reluctantly swerved aside.

On such occasions one bird is often angrily pursued by another. These pursuits are most reckless and enduring in character. One sees the two birds swirl by like two blue flashes of light, to disappear in an instant of time on perfectly controlled wings perhaps far away in the pine woods, almost grazing the tough trunk of some mighty tree, or heading straight for a sheer cliff and rising fifteen feet or more to clear it when it seems that they must be dashed to pieces on the rock. I once saw a Kingfisher, hard-pressed in such a pursuit, adopt a clever means of escape. His pursuer was close upon him—about five feet behind. On they came down the creek, neither bird seeming to gain upon the other. Both were flying at top speed low over the water. Suddenly there was a splash, and the foremost Kingfisher disappeared under the water. The bird behind swept on and lit on a nearby stub, not attempting to renew the chase when his enemy reappeared. I cannot say that the first bird did not see a fish which he dived for, but it appeared to me at the time like a very ingenious method for dampening his opponent's enthusiasm.

The Kingfisher's flight is remarkable for its beauty. How easily those long wings carry him about, as he skims so close over the water that their tips are sometimes wetted, or, as he hovers, his body appearing absolutely motionless, in that wonderful way which few birds can equal, for indefinite periods of time. Sometimes, especially in water half a foot or less in depth, he dives while flying nearly parallel to its surface. Sometimes, in this journeys from perch to perch when fish are plentiful, he dips again and again into the water in this way, reminding one of the Swallow as he gracefully touches the water here and there in his flight over the mill-pond. Again, he drops like a falling stone in a nearly perpendicular line upon his fishy prey.

But, however interesting his actions on the wing may be, his postures and general conduct on the hunting stub also demand our attention. Studer, on page

20 of his large book on the birds of North America, mentions a Kingfisher that was found in 1850 on the shore of a little Connecticut creek with a clam-shell closed over his bill. This fact, together with experiences of my own, leads me to believe that the Kingfisher sometimes fishes from a mud-flat or even standing in shallow water. A live clam, so far as I know, does not open his shell unless exposed to the air, nor is he found in nature above the surface of the mud. A Kingfisher would hardly dive at an object on or in the dry mud. What, then, could the bird in question have been doing when he found the clam? Obviously he was either standing or walking on the ground.

Though I have not yet been able to prove this statement from my own observations, yet I have had several experiences which lead me to believe that it is true. Once I awoke early in the morning in my tent on the shore of a little lake in Maine. The film of sleep was still upon my eyes, and I rubbed them sleepily as I sat up and looked out upon the water. There, close in shore, was a small bird resembling a Kingfisher standing in the shallow water, where a school of young bass, the prey of every passing pickerel, had congregated for protection from the larger fish. The dampness of the lake mist got into my nostrils and I felt that I must sneeze. I lay back quickly among my blankets out of sight. When I peered out again, the bird had disappeared. Several years later I was watching near the bank of a salt-water creek for the appearance of a Woodchuck at the mouth of his hole, when a Kingfisher suddenly flew up from somewhere below the bank, where, I could not see. He had either been on a low rock or on the mud itself. The former may have been the case, for I have seen Kingfishers fishing from perches not over a foot above the water. This question still remains to be solved.



KINGFISHER

Photographed by Henry R. Carey

Only once have I seen a pellet of fish-bones and scales being disgorged from the bird's beak, as he sat on his hunting perch. These pellets are found wherever the birds are accustomed to sit for any length of time. I once found one completely composed of various parts of the shell of a small crab. Only a few days later I had the pleasure of seeing a crab actually caught. The bird captured him by diving in the usual way and took him to a low rock where he proceeded to bang him just as he would have done to a minnow. During this process the crab, which measured an inch and a half sideways across the shell, lost several legs and was dropped upon the rock, from which by a considerable effort he managed to fall by scrambling to the edge with his remaining legs. The bird, perhaps seeing that he was rather a large morsel to swallow whole, then forgot him completely and went on with his fishing.

Two summers ago I found myself wishing intensely to photograph some of these wild, frowsy-headed dwellers of the earth, the water and the skies. I studied their favorite perches, my plan being to hide the camera near one of them, but every one was unsuitable for my purpose. With sagacious caution they had chosen spots which commanded a wide, open view on all sides, that no enemy might approach them unseen. It was impossible to hide even so much as a folded focusing cloth near most of these places, and many, in addition, were only in the sunlight for a short part of each day, in spite of the broad view which they afforded. At last I hit upon a plan. On a small island in Sagamore creek stood a tiny shack, old and beaten by the elements until the wild creatures had no more fear of it. One could sit inside this place early in the morning and listen to the low, apparently conversational notes of the Crows, as they walked up and down on the ridge-pole, or watch the shy Night Herons fishing in the water only a few feet away. Here, too, the Kingfishers came very often to clatter and to fish in the stunted cedar trees that protected one side of the blind. In the narrow channel between the island and the mainland, where minnows abound, I stuck an old tether-ball pole into the mud. On the island, near the pole, I placed an ancient soap-box with a small hole in one end of it and, between the box and the shack, I drove as many sticks with staples in them as I needed. After about a month the box and the pole had weathered enough to make the Kingfishers no longer afraid of them. Then I placed the camera under the old box, the lens opposite the hole, and ran a thread from the shutter, through the staples, to my blind. Morning after morning I visited the island shortly after sunrise and watched the habits of the Kingfishers as they plied their fishing from my pole. Many a minnow I saw go down their rapacious throats after undergoing a vigorous chewing and banging in their vice-like beaks, and many a curious attitude did I see them take as they clattered softly to themselves within a few feet of my eye. And during this time I got a few good photographs by the device already described.

The Migration of Vireos

THIRD AND CONCLUDING PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data
in the Biological Survey

With drawings by LOUIS AGASSIZ FUERTES

YELLOW-GREEN VIREO

This Vireo has scant claim to a place in the fauna of the United States. It occurs regularly in northern Mexico not far south of the United States boundary, and extends thence through Central America to northern South America.

Wanderers have been taken three times in the United States; at Fort Brown, Texas, August 23, 1877; Riverside, California, September 29, 1887; Godbout, Quebec, May 13, 1883.

YELLOW-THROATED VIREO

This Vireo winters south of the United States, and in spring those individuals that are to nest on the Atlantic slope make the long flight across the Gulf of Mexico to northern Florida and the Gulf States, avoiding the shorter and easier flights by way of Cuba and southern Florida.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Lower Suwanee River, Fla.....			March 14, 1890
Pensacola, Fla.....			March 22, 1885
Savannah, Ga.....	3	April 12	April 10, 1906
Atlanta, Ga. (near).....	6	April 15	April 7, 1903
Raleigh, N. C.....	17	April 15	April 3, 1888
Lynchburg, Va.....	5	April 19	April 12, 1900
Washington, D. C.	19	April 26	April 19, 1891
Beaver, Pa.....	6	April 29	April 26, 1889
Morristown, N. J.....	8	May 4	April 27, 1890
Englewood, N. J.....	6	May 5	May 1, 1886
New Providence, N. J.....	6	May 5	May 1, 1890
Croton-on-Hudson, N. Y.	6	May 4	May 2, 1891
Alfred, N. Y.....	8	May 7	May 4, 1904
Ballston Spa, N. Y.....	8	May 9	May 6, 1904
Portland, Conn.....	7	May 4	April 30, 1894
Hadlyme, Conn.....	7	May 6	April 29, 1906
Jewett City, Conn.....	10	May 7	April 30, 1893
Hartford, Conn.....	10	May 7	April 29, 1906
Providence, R. I.....	5	May 5	May 3, 1907
West Roxbury, Mass.....	7	May 6	May 3, 1890
Springfield, Mass.	6	May 7	May 4, 1899
Beverly, Mass.....	10	May 12	May 8, 1904
Randolph, Vt.....	5	May 8	May 5, 1890
St. Johnsbury, Vt.....	6	May 11	May 6, 1905
Durham, N. H.....			May 16, 1901
Lewiston, Me.....			May 14, 1900
East Sherbrooke, Quebec.....			May 10, 1903
San Antonio, Texas.....	5	March 20	March 17, 1894
Kerrville, Texas.....	6	March 24	March 17, 1907
Gainesville, Texas.....	3	April 8	April 6, 1885
New Orleans, La.....			April 4, 1896

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Bay St. Louis, Miss.....			March 24, 1902
Helena, Ark.....	7	April 5	March 31, 1905
Chattanooga, Tenn.....	4	April 9	April 8, 1905
Athens, Tenn.....			April 8, 1906
Lexington, Ky.....			April 18, 1902
St. Louis, Mo.....	6	April 17	April 13, 1887
Brookville, Ind.....	4	April 23	April 21, 1894
Bloomington, Ind.....	5	April 24	April 16, 1886
Wauseon, O.....	9	April 27	April 21, 1896
Oberlin, O.....	13	May 1	April 25, 1902
Petersburg, Mich.....	11	April 28	April 24, 1891
Southwestern Ontario.....	8	May 24	April 30, 1897
Ottawa, Ont.....			May 11, 1906
Manhattan, Kans.....			April 22, 1885
Keokuk, Ia.....	7	May 4	April 26, 1896
Grinnell, Ia.....	4	May 5	May 1, 1887
Chicago, Ill.....	10	May 5	April 27, 1902
Lanesboro, Minn.....	6	May 7	April 27, 1888
Lincoln, Nebr.....	4	May 14,	May 6, 1899
Southern Manitoba.....			May 5, 1900

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Lanesboro, Minn.....	5	September 11	September 15, 1889
Grinnell, Ia.....	5	September 13	September 20, 1889
Chicago, Ill.....	3	September 21	September 24, 1895
Wauseon, O.....	7	September 23	October 2, 1894
Detroit, Mich.....			October 2, 1904
St. Louis, Mo.....			October 12, 1885
Bloomington, Ind.....			October 19, 1902
Ariel, Miss.....			October 14, 1897
New Orleans, La.....			October 11, 1896
Phillips, Me.....			September 5, 1905
Croton-on-Hudson, N. Y.....	3	September 25	September 28, 1888
Morristown, N. J.....	3	September 10	September 12, 1906
Beaver, Pa.....	3	October 5	October 11, 1899
Washington, D. C.....	5	September 12	September 29, 1907
Lynchburg, Va.....	3	September 22	September 30, 1901
Raleigh, N. C.....	5	September 8	September 16, 1891
Tallahassee, Fla.....			October 15, 1900

BLUE-HEADED VIREO

The variability of this species has made possible its separation into several well distinguished forms. The typical Blue-headed Vireo nests from Wisconsin and from the mountains of Pennsylvania, north to southern Mackenzie and to Nova Scotia. It winters from Florida and Louisiana south through eastern Mexico to Guatemala. A few Blue-headed Vireos remain to nest in the southern Alleghenies, from Maryland to South Carolina, and perform only a short migra-

tion, wintering from the lower parts of South Carolina to central Florida. They have received the name of the Mountain Vireo, and they migrate earlier in the spring than the typical Blue-headed form. Near Asheville, N. C., at two thousand feet altitude, they appear on the average, March 10, while the Blue-headed does not reach Raleigh, N. C., until two weeks later, thus reversing the usual rule that birds on the lowlands arrive earlier than those of the same latitude in the mountains.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Raleigh, N. C.....	12	March 26	March 18, 1890
Washington, D. C.....	12	April 18	April 6, 1905
Renovo, Pa.....	9	April 22	April 5, 1905
Morristown, N. J.....	4	April 28	April 22, 1887
Southeastern New York.....	3	May 2	April 30, 1896
Lockport, N. Y.....	3	May 4	May 3, 1885
Central Connecticut.....	10	April 28	April 22, 1893
Beverly, Mass.....	9	April 29	April 19, 1899
Fitchburg, Mass.....	7	April 27	April 18, 1897
Monadnock, N. H.....	3	April 24	April 23, 1902
Southwestern Maine.....	11	May 1	April 28, 1894
Montreal, Canada.....			May 3, 1890
Scotch Lake, New Brunswick.....	6	May 5	April 30, 1905
San Antonio, Tex.....			March 3, 1890
St. Louis, Mo.....	4	April 30	April 21, 1896
Bloomington, Ind.....	4	April 29	April 28, 1885
Oberlin, O.....	8	April 29	April 17, 1902
Petersburg, Mich.....	2	April 29	April 24, 1885
Chicago, Ill.....	5	May 4	April 27, 1902
Southwestern Ontario.....	7	May 4	April 25, 1889
Ottawa, Ont.....	8	May 12	May 8, 1904
Central Iowa.....	11	May 8	May 3, 1890
Lanesboro, Minn.....	7	May 8	May 3, 1890
Elk River, Minn.....	4	May 10	May 7, 1887
Aweme, Manitoba.....	6	May 14	May 6, 1900
Edmonton, Alberta.....			May 11, 1897
Fort Chipewyan, Alberta.....			May 23, 1901
Fort Simpson, Mackenzie.....			May 22, 1904

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Athabaska Landing, Alberta.....			September 4, 1903
Aweme, Manitoba.....	6	September 21	September 30, 1903
Lanesboro, Minn.....	4	September 25	September 28, 1889
Ottawa, Ont.....			October 11, 1891
Phillips, Me.....			October 6, 1905
Detroit, Mich.....			October 8, 1905
Chicago, Ill.....	3	October 6	October 9, 1895
Providence, R. I.....	3	October 8	October 10, 1897
Réno, Pa.....	8	October 12	October 17, 1902
Croton-on-Hudson, N. Y.....	4	October 19	October 23, 1887
Lexington, Ky.....			October 16, 1904
St. Louis, Mo.....			October 20, 1893
Washington, D. C.....	6	October 18	November 3, 1906
Raleigh, N. C.....	9	October 31	December 15, 1885

PLUMBEOUS VIREO

The Blue-headed Vireo of the Rocky mountain region is called the Plumbeous Vireo. It comes into extreme western Texas and breeds from there west to Arizona and north to Wyoming and South Dakota. It is a late migrant and its arrival in the mountains of southern Arizona has been noted in different years from April 30 to May 6. The first was seen at Colorado Springs, Colo., May 3, 1882 and at Loveland, Colo., May 11, 1889.

CASSIN'S VIREO

The Blue-headed Vireo of the Pacific slope has received the above name. It is an earlier migrant than the Plumbeous Vireo and in southern Arizona it arrives at least two weeks the earlier and passes on north to breed, while the later-arriving Plumbeous remains and nests. The arrival of Cassin's Vireo in southern Arizona has been noted in different years from April 6 to April 16. It is present in the fall from about August 20 to the middle of September. The average date of arrival at Columbia Falls, Montana, is April 28, earliest, April 26, 1895; last seen, September 12, 1895. In southern California the average date of arrival is April 9, earliest April 4, 1896. Other dates of the first seen are: Nicasio, Cal., April 5, 1876; Stockton, Cal., April 22, 1879, April 28, 1880; Beaverton, Ore., April 17, 1885; Fort Klamath, Ore., April 28, 1887; Corvallis, Ore., April 30, in 1899, 1900 and 1904; Tacoma, Wash., April 28, 1903, April 25, 1904, April 23, 1905 and April 18, 1907; Seattle, Wash., April 17, 1907. Victoria, B. C., April 27, 1893; Okanagan Landing, B. C., May 4, 1906 and April 29, 1907. The latest fall date at Los Angeles, Cal., is October 13, 1898;



HOUSE WRENS

Photographed by J. C. Elson, Madison, Wis.

The Massachusetts Audubon Society's Bird-Lists

THE Massachusetts Audubon Society continues to develop in its members a practical interest in birds by supplying them with blanks on which to record the species observed during the year in Massachusetts. The ten best lists received by the secretary of the Society for the year ending December 31, 1908, were made by the following members: Lidian E. Bridge, West Medford, 219 species; James L. Peters, Jamaica Plain, 218 species; Barron Brainerd, Brookline, 211 species; Richard M. Markle, 187 species; Joseph Kittredge, Jr., 179 species; Charles Schweinfurth, 142 species; Anna K. Barry, Dorchester, 138 species; Richard L. Creese, 137 species; Samuel Dowse Robbins, 121 species; Bertha Langmaid, 121 species. The two lists first mentioned are published herewith.

Name of Species	List of Birds observed by Lidian E. Bridge, in Mass., from January 1, 1908, to January 1, 1909.		List of Birds observed by James L. Peters, in Mass., from January 1, 1908, to January 1, 1909.	
	Locality	Date	Locality	Date
Holboëll's Grebe	Nahant	Jan. 4	Nahant	Feb. 8
Horned Grebe	Marblehead	Jan. 6	Lynn	Jan. 4
Pied-billed Grebe	Middlesex Fells	Oct. 24	Randolph	April 10
Loon	Marblehead	Jan. 6	Swampscott	Jan. 4
Red-throated Loon	Marblehead	Jan. 6	Nahant	Nov. 28
Black Guillemot	Marblehead	Jan. 6	Marblehead	Jan. 4
Brunnich's Murre	Nahant	Dec. 28		
Razor-billed Auk	Nahant	Dec. 22	Rockport	Dec. 28
Pomarine Jæger	Ipswich	Aug. 23		
Kittiwake	Ipswich	Oct. 7	Nahant	Jan. 1
Great Black-backed Gull	Nahant	Jan. 4	Boston	Jan. 1
Herring Gull	Medford	Jan. 2	Boston	Jan. 1
Ring-billed Gull	Nahant	Oct. 5	Boston	Jan. 1
Laughing Gull	Naushon	July 12	Wood's Hole	Aug. 1
Bonaparte's Gull	Ipswich	Aug. 28	Ipswich	Sept. 12
Common Tern	Naushon	July 11	Wood's Hole	Aug. 1
Arctic Tern	Naushon	July 11	Wood's Hole	Aug. 1
Roseate Tern	Naushon	July 11	Chilmark	Aug. 31
Least Tern	Nantucket	July 26	Chilmark	Aug. 3
Wilson's Petrel			Nahant Bay	June 25
Gannet	Ipswich	Nov. 7	Ipswich	Oct. 24
Double-crested Cormorant	Ipswich	May 19	Nahant	Oct. 12
American Merganser	Newton	Mar. 12	Brookline	Mar. 7
Red-breasted Merganser	Marblehead	Jan. 6	Marblehead	Jan. 4
Hooded Merganser	Middlesex Fells	Nov. 15	Middlesex Fells	Nov. 21
Mallard	Newton	Mar. 4	Brookline	Mar. 7
Black Duck	Middlesex Fells	Jan. 5	Boston	Jan. 1
Red-legged Black Duck	Middlesex Fells	Jan. 5	Jamaica Plain	Jan. 1
Green-winged Teal	Boston	Jan. 6	Boston	Jan. 1
Blue-winged Teal	Middlesex Fells	Sept. 25	West Tisbury	Aug. 4
Pintail	Middlesex Fells	Oct. 25	Cambridge	Oct. 21
Wood Duck	Ponkapog	Aug. 8	Randolph	April 3
Redhead			Edgerton	Dec. 30
Scaup Duck	Marblehead	Jan. 6	Lynn	Feb. 8

List of Birds observed by
Eidian E. Bridge, in Mass.,
from January 1, 1908, to
January 1, 1909.

List of Birds observed by
James L. Peters, in Mass.,
from January 1, 1908, to
January 1, 1909.

Name of Species	Locality	Date	Locality	Date
Lesser Scaup Duck	Middlesex Fells	Nov. 2	Randolph	April 10
American Golden-eye	Nahant	Jan. 4	Boston	Jan. 1
Buffle-head	Nahant	Feb. 22	Nahant	Jan. 1
Old-squaw	Nahant	Jan. 4	Marblehead	Jan. 4
American Scoter	Marblehead	Jan. 6	Nahant	Oct. 12
White-winged Scoter	Marblehead	Jan. 6	Nahant	Feb. 8
Surf Scoter	Ipswich	Oct. 7	Lynn	Feb. 8
Ruddy Duck	Jamaica Pond	Oct. 23	Randolph	April 6
Canada Goose	Middlesex Fells	Mar. 23	Edgarton	Dec. 30
American Bittern	Waverly	May 4	Cambridge	April 24
Least Bittern	Cambridge	June 21		
Great Blue Heron	Ipswich	Mar. 31	Dedham	April 8
Green Heron	Cohasset	May 30	Cambridge	April 24
Black-crowned Night Heron	Ipswich	April 21	Brookline	May 14
Virginia Rail	Cambridge	April 22	Cambridge	April 24
Sora	Cambridge	June 5	Cambridge	May 9
Florida Gallinule	Cambridge	April 29		
American Coot	Jamaica Pond	Feb. 17	Jamaica Plain	Jan. 1
American Woodcock	Salem	April 7	Natick	April 4
Wilson's Snipe	Cambridge	April 11	Cambridge	Sept. 25
Dowitcher	Ipswich	Aug. 21	Chilmark	Aug. 20
Knot			Chilmark	Aug. 28
Pectoral Sandpiper	Ipswich	May 23	Chilmark	Aug. 20
White-rumped Sandpiper	Ipswich	May 23	Chilmark	Aug. 28
Least Sandpiper	Ipswich	May 19	Ipswich	May 16
Red-backed Sandpiper	Ipswich	Sept. 23	Ipswich	May 16
Semipalmated Sandpiper	Ipswich	May 19	Ipswich	May 16
Sanderling	Ipswich	May 19	Ipswich	May 16
Greater Yellow-legs	Ipswich	May 19	Ipswich	May 16
Yellow-legs	Ipswich	Aug. 21	Chilmark	Aug. 3
Solitary Sandpiper	Sudbury	May 27	Franklin Park	Sept. 21
Bartramian Sandpiper	Nantucket	July 26	Shellburn Falls	June 28
Spotted Sandpiper	Middlesex Fells	May 12	Lexington	May 2
Hudsonian Curlew			Chilmark	Aug. 25
Black-bellied Plover	Ipswich	May 19	Ipswich	May 16
Killdeer			Marblehead	Dec. 5
Semipalmated Plover	Ipswich	May 23	Chilmark	Aug. 5
Piping Plover	Ipswich	May 19	Ipswich	May 16
Ruddy Turnstone	Ipswich	Aug. 23	Ipswich	May 16
Bob-white	Braintree	July 4	Arboretum	Jan. 19
Ruffed Grouse	Middlesex Fells	Mar. 15	Arboretum	Jan. 1
Mourning Dove	Sudbury	May 21	Wayland	April 18
Marsh Hawk	Ipswich	April 21	Dedham	April 8
Sharp-shinned Hawk	Arboretum	Mar. 28	Franklin Park	Feb. 17
Cooper's Hawk	Waverly	April 19	Natick	April 4
Red-tailed Hawk	Salem	May 2	Dedham	April 20
Red-shouldered Hawk	Middlesex Fells	Mar. 8	Franklin Park	Mar. 4
Broad-winged Hawk	Greylock	June 13	Concord	May 2
Am. Rough-legged Hawk	Ipswich	Nov. 7	Cambridge	Nov. 10
Bald Eagle			Belmont	May 9
Duck Hawk			Ipswich	Sept. 12
Pigeon Hawk	Middlesex Fells	May 3	Boston	Nov. 24
American Sparrow Hawk	Waverly	May 14	Franklin Park	Jan. 25
American Osprey	Ipswich	Sept. 23	Cambridge	May 2
Short-eared Owl	Ipswich	Nov. 7	Ipswich	April 11

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Name of Species	Locality	Date	Locality	Date
Screech Owl	Medford	Jan. 17	Jamaica Plain	Mar. 21
Yellow-billed Cuckoo	Concord	May 18	Franklin Park	May 18
Black-billed Cuckoo	Middlesex Fells.	May 15	Franklin Park	May 22
Belted Kingfisher	Middlesex Fells.	April 5	Boston	Mar. 14
Hairy Woodpecker	Middlesex Fells.	Jan. 5	Franklin Park	Jan. 26
Downy Woodpecker	Middlesex Fells.	Jan. 19	Franklin Park	Jan. 14
Yellow-bellied Sapsucker	Middlesex Fells.	April 17	Ipswich	April 11
Red-headed Woodpecker			Franklin Park	May 14
Northern Flicker	Medford	Jan. 23	Franklin Park	Jan. 1
Whippoorwill	Athol	Jan. 15	Wenham	June 25
Nighthawk	Sudbury	May 21	Jamaica Plain	June 1
Chimney Swift	Middlesex Fells.	May 3	Cambridge	May 1
Ruby-throated Hummingbird	Sudbury	May 21	Belmont	May 22
Kingbird	Medford	May 15	Jamaica Plain	May 9
Crested Flycatcher	Middlesex Fells.	May 26	Arboretum	May 17
Phoebe	Medford	Mar. 27	Franklin Park	Mar. 22
Olive-sided Flycatcher	Greylock	June 13	Greylock	June 30
Wood Pewee	Sudbury	May 21	Marlboro	May 23
Yellow-bellied Flycatcher	Middlesex Fells.	May 23	Greylock	July 1
Alder Flycatcher	Greylock	June 13		
Least Flycatcher	Cambridge	April 29	Dedham	April 28
Horned Lark	Nahant	Jan. 4	Nahant	Jan. 1
Prairie Horned Lark	Ipswich	Aug. 21	Ipswich	Sept. 12
Blue Jay	Medford	Jan. 1	Franklin Park	Jan. 1
American Crow	Medford	Jan. 1	Franklin Park	Jan. 1
Bobolink	Medford	May 15	Cambridge	May 2
Cowbird	Medford	Mar. 16	Belmont	May 28
Red-winged Blackbird	Medford	Mar. 20	Milton	Mar. 13
Meadowlark	Medford	Mar. 15	Cambridge	Mar. 14
Orchard Oriole	Ipswich	May 19	Holyoke	June 27
Baltimore Oriole	Medford	May 11	Belmont	May 9
Rusty Blackbird	Cambridge	Mar. 25	Franklin Park	Jan. 18
Bronzed Grackle	Medford	Mar. 16	Milton	Mar. 13
Purple Finch	Medford	April 19	Sharon	April 17
American Crossbill	Ipswich	Mar. 31	Stoneham	Mar. 14
White-winged Crossbill	Middlesex Fells.	Nov. 21	Arboretum	Nov. 1
Redpoll	Middlesex Fells.	Nov. 21	Middlesex Fells.	Nov. 21
American Goldfinch	Middlesex Fells.	Jan. 5	Jamaica Plain	Jan. 26
Pine Siskin	Medford	April 26	Franklin Park	April 26
Snowflake	Ipswich	Mar. 31	Ipswich	April 11
Lapland Longspur	Ipswich	Oct. 22	Ipswich	Oct. 24
Vesper Sparrow	Medford	April 7	Dover	April 6
Ipswich Sparrow	Ipswich	Mar. 31	Nahant	Mar. 21
Savanna Sparrow	Medford	Mar. 27	Jamaica Plain	April 5
Grasshopper Sparrow	Concord	May 18	Hadley	June 28
Henslow's Sparrow	Norwood	June 7	Norwood	May 30
Sharp-tailed Sparrow	Ipswich	May 19	Chilmark	Aug. 16
White-crowned Sparrow	Boston	May 13	Arboretum	April 26
White-throated Sparrow	Middlesex Fells.	April 17	Boston	Mar. 14
Tree Sparrow	Middlesex Fells.	Jan. 5	Jamaica Plain	Feb. 12
Chipping Sparrow	Natick	April 10	Arboretum	April 10
Field Sparrow	Middlesex Fells.	April 7	Arboretum	April 7
Slate-colored Junco	Medford	Mar. 14	Franklin Park	Jan. 25
Song Sparrow	Medford	Mar. 12	Jamaica Plain	Feb. 12
Lincoln's Sparrow	Boston	May 13	Franklin Park	Sept. 23

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	Locality	Date	Locality	Date
Swamp Sparrow.....	Cambridge	April 6	Cambridge	Mar. 28
Fox Sparrow.....	Medford	Mar. 15	Boston.....	Mar. 14
Towhee	Middlesex Fells.	April 26	Franklin Park .	April 26
Rose-breasted Grosbeak.....	Middlesex Fells.	May 12	Arboretum	May 12
Indigo Bunting	Medford	May 12	Franklin Park .	May 17
Scarlet Tanager	Concord	May 18	Franklin Park .	May 13
Purple Martin	Concord	May 1	Concord	May 2
Cliff Swallow	Concord	May 18	Ipswich.....	May 16
Barn Swallow	Cambridge	April 29	Ipswich.....	April 11
Tree Swallow	Middlesex Fells.	April 5	Dover	April 6
Bank Swallow	Concord	May 1	Ipswich.....	May 16
Cedar Waxwing	Medford	Feb. 15	Roxbury	Jan. 8
Northern Shrike.....	Nahant	Jan. 4	Franklin Park .	Jan. 1
Red-eyed Vireo	Medford	May 10	Jamaica Plain .	May 14
Warbling Vireo	Medford	May 18	Ipswich.....	May 16
Yellow-throated Vireo.....	Cambridge	April 29	Franklin Park .	May 9
Blue-headed Vireo.....	Middlesex Fells.	May 12	Franklin Park .	May 12
White-eyed Vireo	Braintree	July 4	Braintree	June 17
Black and White Warbler....	Middlesex Fells.	April 24	Franklin Park .	April 29
Golden-winged Warbler	Medford	May 12	Franklin Park .	May 12
Nashville Warbler	Concord	May 1	Concord	May 2
Tennessee Warbler	Medford	May 26		
Northern Parula Warbler....	Cambridge	April 29	Concord	May 2
Yellow Warbler	Medford	April 28	Franklin Park .	April 24
Black-throated Blue Warbler.	Medford	May 12	Boston.....	May 13
Myrtle Warbler.....	Middlesex Fells.	April 24	Sharon.....	April 17
Magnolia Warbler	Medford	May 12	Franklin Park .	May 12
Chestnut-sided Warbler	Medford	May 12	Franklin Park .	May 13
Bay-breasted Warbler.....			Wayland.....	Sept. 26
Black-poll Warbler	Medford	May 19	Franklin Park .	May 17
Blackburnian Warbler	Medford	May 12	Franklin Park .	May 17
Black-throated Green Warb'r	Concord	May 1	Dedham	April 28
Pine Warbler	Medford	April 17	Dover	April 6
Palm Warbler	Medford	Oct. 10	Middlesex Fells.	Oct. 13
Yellow Palm Warbler.....	Medford	April 7	Arboretum	April 17
Prairie Warbler	Medford	May 15	Franklin Park .	May 12
Ovenbird.....	Medford	May 3	Franklin Park .	April 30
Water Thrush	Cambridge	April 29	Marlboro	May 23
Connecticut Warbler.....	Boston.....	Oct. 18	Greylock.....	July 1
Mourning Warbler.....	Greylock.....	June 14	Greylock.....	June 29
Northern Yellow-Throat	Concord	May 6	Cambridge	May 1
Yellow-breasted Chat	Medford	June 7		
Wilson's Warbler	Concord	May 18	Marlboro	May 23
Canadian Warbler.....	Medford	May 23	Franklin Park .	May 24
American Redstart	Waverly	May 4	Franklin Park .	May 13
American Pipit	Middlesex Fells.	April 19	Boston	Oct. 15
Catbird	Cohasset.....	April 27	Arboretum	April 26
Brown Thrasher	Boston	May 5	Franklin Park .	April 26
House Wren	Medford	April 25	Belmont	May 22
Winter Wren	Middlesex Fells.	Mar. 1	Stoneham	Mar. 14
Short-billed Marsh Wren	Norwood.....	June 6	Norwood	May 30
Long-billed Marsh Wren	Cambridge	June 5	Cambridge	May 1
Brown Creeper.....	Middlesex Fells.	Jan. 11	Jamaica Plain .	Jan. 1
White-breasted Nuthatch	Medford	Jan. 2	Jamaica Plain .	Jan. 1
Red-breasted Nuthatch.....	Middlesex Fells.	Jan. 19	Stoneham	Mar. 14

Name of Species	List of Birds observed by Lidian E. Bridge, in Mass., from January 1, 1908, to January 1, 1909.		List of Birds observed by James L. Peters, in Mass., from January 1, 1908, to January 1, 1909.	
	Locality	Date	Locality	Date
Chickadee	Medford	Jan. 1	Jamaica Plain .	Jan. 1
Golden-crowned Kinglet.....	Medford	Jan. 5	Jamaica Plain .	Jan. 1
Ruby-crowned Kinglet	Medford	April 17	Arboretum	April 10
Wood Thrush.....	Medford	May 12	Arboretum	May 20
Wilson's Thrush	Middlesex Fells.	May 3	Concord	May 2
Gray-cheeked Thrush.....	Cambridge	Oct. 3	Franklin Park .	Oct. 11
Bicknell's Thrush	Greylock.....	June 14	Greylock.....	June 29
Olive-backed Thrush.....	Medford	May 15	Franklin Park .	May 12
Hermit Thrush.....	Medford	April 7	Sharon.....	April 17
American Robin.....	Medford	Mar. 12	Arboretum	Jan. 19
Bluebird.....	Medford	Mar. 8	Franklin Park .	Mar. 12
Dovekie	Rockport	Dec. 21		
Glaucous Gull	Swampscott	Jan. 18	Ipswich.....	April 11
Iceland Gull	Swampscott	Jan. 18	Lynn.....	Jan. 4
Kumlein's Gull.....	Boston.....	Jan. 25	Nahant	Jan. 25
Black Tern	Ipswich.....	Aug. 21	Chilmark	Aug. 16
Sooty Sparrow.....	Nantucket S'nd.	July 24		
American Widgeon	Jamaica Plain .	Dec. 17		
Shoveller	Middlesex Fells.	Oct. 31		
Canvasback.....	Newton.....	Mar. 12	Brookline	Mar. 7
Ring-necked Duck.....	Middlesex Fells.	Oct. 25	Middlesex Fells.	Oct. 28
Still Sandpiper	Ipswich.....	Aug. 21		
Ring-necked Pheasant.....	Medford	Jan. 18	Franklin Park .	Jan. 1
Lark Sparrow.....	Ipswich.....	Aug. 28		
Prothonotary Warbler.....	Concord	May 1		
Brewster's Warbler	Arboretum	May 20	Arboretum	May 14
Cape May Warbler	Boston	May 15		
Mockingbird.....	Medford	Feb. 7	Franklin Park .	Feb. 9
Carolina Wren	Naushon.....	July 14	Franklin Park .	July 17
Nelson's Sparrow.....			Wayland.....	Sept. 26
Baldpate.....			Jamaica Plain .	Dec. 14
Hoary Redpoll			Cambridge	Dec. 26
Heath Hen			Edgartown	Dec. 30
Purple Grackle.....			Chilwark	Aug. 3



Notes from Field and Study

The Dovekie Near Buffalo

November 15, 1908, I found on the Canadian shore of Lake Erie, about seven miles from Buffalo, the body of a Dovekie (*Alle alle*). The skin was identified by Mr. Savage and Dr. Cummings of the Buffalo Academy of Science and is still in my possession. The specimen was a male, entirely free from subcutaneous fat, and the crop was empty.

November 14, 1908, there was a heavy snow storm with high wind. November 8, 1908, there were many large flocks of Snowflakes, which is earlier than they usually appear in this neighborhood.—EVERETT P. WHEELER, II, Buffalo, N. Y.

"Retribution"

In May, 1908, whilst searching for an albino Bluebird, which, with her cerulean mate, were reported to have frequently been seen on the outskirts of the city, I discovered two Bullock Oriole's nests in a large cottonwood, each occupied by a pair of English Sparrows. These sharp birds had pre-empted the last year's pensile nests of the Orioles, ballooning them to enormous proportions, building a round doorway in one side according to their custom; and in these swinging homes high in the air, raised their numerous broods during the summer.

I intended securing one of these nests to photograph and place in my collection of odd birds' nests, but was prevented by a long, serious illness from doing so until in October. On October 17, I visited the tree and found one of the nests still occupied by the Sparrows as a home, but the other nest had disappeared, whether it had been torn from its moorings by some wind storm, or removed by curio hunters, I am unable to say. In critically scrutinizing the massive top of the tree with my glasses, I discovered an Oriole's nest of the present season, and, greatly to my astonishment,

noted the presence of the female on a branch just above the nest. The great host of Bullock Orioles, which breed and spend their summer in this region, had left on



HOUSE SPARROW ENTANGLED IN
NEST OF BULLOCK'S ORIOLE

their migration to the South a month before; and why should this lone mother bird thus delay her going and linger about the empty nest? Presently, I thought the key to the mystery was mine, for with the aid of the glasses a bird with its neck entangled in the loosely woven horse-hairs of the upper rim of the nest, was made out dangling in the air, but the thick yellow leaves so obstructed the view it was impossible to make out to what species it belonged. The fact of the presence of the female naturally caused me to imagine that her mate had come to his death in this

tragic manner, and that her devotion and loyalty chained the bereaved mate to the spot where their summer joys had been shared together. My mind was filled with the pathos of the tragic event in the lives of the beautiful birds, and my heart overflowed with sympathy for the lone, faithful watcher beside the empty nest.

The nest was hung to the highest branch of the tree, and I was unable to secure it the following day when I procured the old nest occupied by the Sparrows; but, on the 20th, a couple of adventurous tree trimmers captured the trophy and placed it in my hands, and what was my chagrin and disgust to discover that the dead bird hanging by the neck was a male English Sparrow. He had become "a hanging bird" but not an Oriole. The feeling of pity and sympathy which had filled my heart, underwent a sudden revulsion, and one of satisfaction that the highway marauder, in attempting to destroy the happiness of a home, had met with a just retribution, took its place.

But what puzzles me and those familiar with the migratory habits of the Bullock Oriole is, why the female should remain near her nest so late in the season. A cold wave accompanied by a considerable fall of snow occurred on the night of the 20th, and she was not seen after that date.

The accompanying photograph of the nest and dangling body of the self-executed robber tells the tragic story better than words.—W. W. ARNOLD, *Colorado Springs Colo.*

A Young Oriole's Experience

On June 6, 1909, as I was on the piazza, there happened to be a very young Oriole, just out of the nest, on the ground, not far away. Apparently this was his first expedition. He did not seem able to fly—but was hopping about trying to use his tiny wings. It was very fascinating to watch him, so I sat down, determined to see what happened. In a few moments the father bird came, and fed the little one. It was a difficult task. The Mockingbirds had a nest in a tree close by, and, every time

the parent Orioles came to feed the young bird, the Mockingbirds chased them away. It was a period of twenty minutes from the time the parent Oriole last fed the young one till he came again. This time he appeared to be in great agitation, and very nervous. He did not feed the tiny bird, but cooed to him in a very excited manner. Suddenly he turned his tail toward the little bird, when to my great astonishment, the little one hopped on. The parent then proceeded to drag the baby bird along for a foot or more when off it slipped. The parent still intent on getting the little bird away from the domain of the belligerent Mockingbirds, once more cooed, and coaxed, then turned his tail for the baby bird to hop on, which he did.

Just as the father again started to drag the little one along, down swooped the Mockingbird, frightening away the parent Oriole and tumbling the baby on the ground. I am told by those who have made a study of birds for years that this is an exceedingly remarkable and unheard of thing for any bird to do.

The Mockingbird then began to peck the young bird. I lost no time in chasing away the Mockingbird. I am also told that even birds that will attack a strange adult bird which ventures near their nest seldom molest a young bird. After the baby Oriole recovered from his fright, he made great haste for a low acacia tree nearby. In sheer desperation, he finally succeeded in climbing a slanting bough, or rather trunk of the tree, and in gaining a secluded branch. But he could not escape the vigilant Mockingbird. He had scarcely secured a sure footing when the Mockingbird made another attack on him. Once more I rushed to the rescue. By this time it seemed as if the Mockingbird was determined to clear the premises of all Orioles, regardless of age, and I concluded to guard the little bird myself. My guard continued for half an hour or more, during which time the parent Orioles succeeded in coaxing the tiny bird to a sycamore tree some fifty feet away. The Mockingbird did not attack the Orioles again, and I left them to their fate.—MELL RICE, *Los Angeles, Cal.*

Red-wings Going to Roost

One evening in April, as I was returning from a ramble, I passed a swamp which is a favorite roosting-place in the spring for a large number of Red-winged Blackbirds. It was dusk when I arrived at the place, and a great chattering and "o-gleeing" was going on in the swamp. The odd thing—if it was odd—about the incident was the following: A portion of the plowed hill field at one side of the marsh was black with birds, I should say several hundred of them. Quite a number were also perched on some trees on the crest of the ridge near those on the ground. Why the Red-wings had gathered on the hill before retiring I could only surmise. Now, instead of all of them flying down to the swamp at once, a small flock would suddenly detach themselves from the rest, as if by a signal, and swing down into the vale, distributing themselves among the reeds and flags. Presently another company would do the same, and thus the program was continued at intervals, until the last Red-wing had left the ridge and was ensconced in the dense flags of the swamp.

It looked like an instance of reasoning among the intelligent birds, for if all the host had flown down from the ridge at once, there would have been great confusion in getting to bed. As it was, however, each flock would wait until the preceding flock was well settled, and thus all could retire in good order. At least, it looked as if that was the controlling idea in the plan. It was a clear evening, and perhaps so many of the clans had gathered just at dusk that they could not all get to roost simultaneously, and so they settled first on the ridge, and then went to bed in the orderly way just described.

A couple of weeks later I went to the place to see whether the foregoing program was repeated. I am sorry to have to say it was not. There was no massing of the clans on the plowed ridge. It was a cloudy and blustery evening, and many of the birds had come early, while other small flocks kept coming from a distance, and

settled at once in the roosting resort. Now and then a few would fly up from the swamp and settle for a little while on the plowed field or on the trees, as if they felt that they had gone to bed too early. Then, as darkness fell, all of them swung down to their sleeping apartments in the swamp, saying "ogle-e-e" for "good-night."—LEANDER S. KEYSER, *Canal Dover, O.*

Benumbed Grosbeaks

On May 12, 1909, soon after 8 A.M. I was called out-of-doors for a most unusual surprise. The weather was clear, the mercury during the night barely reaching the frost line, and under the trees by the house a pair of Rose-breasted Grosbeaks had just been found, picked up from the grass almost as easily as if they were dead, and there they perched on the hands that had held them, evidently unable to fly. The female seemed the more active, turning her head readily, but the male even held his eyes nearly shut. Neither showed any injury, so I carried them indoors, walking with the very novel sensation of a live Grosbeak perched on each hand.

Sunlight and a warm room, in a couple of hours had the desired effect, as their efforts to escape indicated, and when taken outdoors both birds made all haste for the trees. What could have been the trouble? Were they simply cold?—ISABEL MCC. LEMMON, *Englewood, N. J.*

Nest-Moving

It was with pleasure that we noted the home-making of a pair of Yellow Warblers which had chosen the lilac bush at the end of our front veranda for a nest-site.

A pair of Robins occupied the back porch, Bluebirds owned the bird-house, and Swallows were at home in our barn, so we were glad to have the Warblers move into our neighborhood.

Material seemed somewhat scarce, so we scattered colored yarn and cotton-batting over the lilac bush and waited to see if our offer of help was to be ac-

cepted. To our delight, Mrs. Warbler appropriated all the material which we had supplied and, in a very short time, had a somewhat bulky nest built. Inasmuch as the nest would not shape itself to the maker, she added more material of her own choosing and soon had the nest finished in a way very satisfactory to all concerned.

In due time, several eggs appeared and the work of incubation began.

While we were away for a day or two, either a cat or an inquisitive small girl who knew of the nest, pulled it down and part of the eggs were thrown out.

We straightened up the nest, hoping that our dainty, trusting bird-neighbors would continue with us but we were doomed to disappointment. For two days, we saw nothing of either bird. Early the third day, we discovered the mother bird busily engaged in tearing the old nest to pieces and carrying it, bit by bit, across a vacant lot, to an apple tree in our neighbor's yard. Very faithfully did she labor all the day until every vestige of the old nest was removed and a fine new home constructed in the old tree, safe from marauding cats and out of the reach of inquisitive girls.

Here, in their new home, young Warblers came in due time and were raised to Warblerhood in safety.—HAROLD J. RUSSELL, *Brocton, N. Y.*

Records of Kirtland's Warbler

On May 18, 1908, a female Kirtland's Warbler was seen at Richmond, Ind., by Mr. M. S. Markle. On May 14, 1909, a male of this species was observed at Urbana, O. This one sang repeatedly, and was watched for a period of an hour or more by a party of observers.

There are two other records of the Kirtland's Warbler in this region. These are May 13, 1905, at New Paris, Ohio, and May 7, 1906, at Richmond, Indiana. May 13 is, therefore, about the average date of the appearance of this species in western Ohio and eastern Indiana.—LOREN C. PETRY, *Urbana, O.*

Blue-winged and Prairie Warblers Near Chicago

At Palos Park, Illinois, on May 15, 1909, as we were walking near a brook amidst wild crab and thorn trees, we heard a song which had become familiar in Indiana and southern Ohio as that of the *Helminthophila pinus*. As this was believed to be a new locality for this Warbler, we took pains to ferret out the songster, and it indeed proved to be the beautiful Blue-winged Warbler. There were at least three males in song. One year ago the writer heard this song in the same locality but was unable to find the bird. Palos Park is some twenty-five miles south of west from Chicago. We hope to find the Blue-winged nesting in this locality, as does the Golden-winged Warbler.

On the sand-dunes along Lake Michigan, twenty miles south of Chicago, on May 17, after watching for some little time a host of Warblers, more or less familiar friends, an unfamiliar one appeared amongst them; the first thing noted was the series of chestnut spots on the back and then point by point the Prairie Warbler was revealed, the identification being completed by the little fellow lifting his voice in song. As we found this bird last year at Urbana, Ill., where it had been recorded, and this year find it where it has rarely been seen, we may hope it is extending its range.—LUCY V. BAXTER COFFIN, *Chicago, Ill.*

A Persistent Robin

I have a Robin that comes regularly every year and builds under my veranda in an American ivy, on the identical spot every time. I remove the old nest when empty. In 1908 she began the first nest April 14, the second nest June 4, and the third nest July 21. The last bird flew away August 24. I suppose some one killed the male bird while the female was sitting the last time, as I never saw him after that; the female raised her last brood alone.—MRS. E. J. WALKER, *North Java, N. Y.*

Book News and Reviews

THE BEHAVIOR OF NODDY AND SOOTY TERNS. By JOHN B. WATSON, Professor of Experimental and Comparative Psychology. The Johns Hopkins University. Papers from the Tortugas Laboratory of the Carnegie Institution of Washington. II, 1908, 189-255 pages. 11 plates.

While ornithologists must regret that this, the first adequate study of the nesting habits of colonial birds, was made by a naturalist who is not primarily an ornithologist, they should be grateful to Dr. Watson for this unique contribution to our knowledge of bird-life, as well as for his admirable exposition of methods of observation and experimentation which he has so profitably employed.

Dr. Watson, who, while working under the auspices of the Carnegie Institution, incidentally served as a warden of the National Association of Audubon Societies, reached Bird Key in the Tortugas on May 4, and remained there, day and night, until July 18. He estimated the avian population of the Key, on the basis of the number of nests counted, to be 1,400 Noddies and 18,858 Sooty Terns. On his arrival the birds were beginning to lay; before his departure young of the year were flying. Here, then, we have a trained investigator, an abundance of material, including two species of birds, and continuity of observation throughout the breeding season. Such conditions have not to our knowledge before been realized, nor are we familiar with a more important paper on the life-history of birds.

In addition to a detailed, intimate study of the habits of each species, we are given the results of a series of carefully planned experiments designed to test their intelligence, one of which has already become widely known as an exceptionally significant contribution to the study of bird migration. We refer to the sending of marked Noddies and Sooties away from the Key and their release at Key West, Havana, and off Cape Hatteras, whence

they returned to the Tortugas, on which we have already commented (*BIRD-LORE*, X, 1908, p. 134).

It is out of the question in this connection even to outline the results of Dr. Watson's paper, and we can only urge every student of bird-life to consult it not alone for its contained information but more particularly because of the methods of research employed.—F. M. C.

BIRDS OF THE BOSTON PUBLIC GARDEN, A STUDY IN MIGRATION. By HORACE WINSLOW WRIGHT. Boston and New York. Houghton, Mifflin & Co. 1909. 16 mo. xiii+238 pages; 8 half-tones.

A city park, from the early morning view-point of the night-migrating bird, is as much an island of rest and refreshment as though it were surrounded by water instead of houses. Often the birds, which, in the country, would have been distributed over a much larger area, are focused in these small green spaces, there to remain until they start on another night journey. Hence birds, as a rule, neither come to nor depart from these city islands by day, and the phenomena of migration are not apt to be confused with merely local movements or diurnal wanderings. The record of migration, therefore, is here written in a few words and a plain language which the student may hope to interpret with comparative ease.

For nine years Mr. Wright has observed the spring migration of birds in the Boston Public Garden with a diligence which bespeaks the enthusiasm of the true bird lover. "Not half a dozen days in the eight seasons subsequent to the year of beginning, have the visit and the record been admitted after the season had opened". As a result we have a fully annotated list of the 116 species which have been seen in the Common or Public Garden, and an introduction on the general subject of migration possessing far more than local interest and value.

Mr. Wright, for example, finds that birds arrive periodically rather than nightly and, consequently, that migrants remain in the garden over one or more nights after their arrival. Migration, therefore, is not continuous, but is accomplished by a succession of flights between which no newcomers will be found.

Mr. Wright's habit of recording the number of individuals, as well as the names of the species observed, gives us some interesting data in regard to the make-up of the mixed bird companies one encounters during migration. For example, thirty-three Warblers seen on May 19, 1900, represented no less than 16 species; while four days later 32 Warblers represented 15 species; and on May 16, 1905, 37 Warblers of 18 species were recorded.

The little book abounds in interesting details of this kind, and tempts quotation more strongly than many a weightier volume. We commend it, therefore, very cordially to all field students, without reference to the distance which they live from Boston Common.—F. M. C.

A BIBLIOGRAPHY OF CALIFORNIA ORNITHOLOGY. By JOSEPH GRINNELL. A contribution from the Museum of Vertebrate Zoology of the University of California. Pacific Coast Avifauna No. 5. Published by the Cooper Ornithological Club. 1909. Royal 8vo. 166 pages.

The literature of American ornithology has increased so enormously since the publication of Coues' bibliography in 1878, that without additional compilations it has become impossible for us to keep account of our constantly growing stock of information. This is particularly true of the state treated by the bibliography in question, about five-sixths of the titles included by Mr. Grinnell, relating to publications which have appeared since 1878. It may be added that although this bibliography covers a period of 111 years (1797-1907) over one-half the papers listed have appeared during the seventeen years since the Cooper Ornithological Club was founded.

It is needless to say that Mr. Grinnell's task is admirably done; his brief anno-

tations are to the point, and to the bibliography proper are added a number of indices which greatly increase the reference value of the work.—F. M. C.

INDEX TO THE BULLETIN OF THE COOPER ORNITHOLOGICAL CLUB, Vol. I, 1899, and its continuation THE CONDOR, Vols. II-X, 1900-1908. Compiled and edited by HENRY BARROILHET KAEDING. Pacific Coast Avifauna No. 6. Published by the Cooper Ornithological Club. 1909. Royal. 8vo. iv+48 pages.

It goes without saying that every student of the bird-life of western North America should have access to 'The Condor,' and it is equally true that to every one who has occasion to refer to the pages of this excellent magazine this index to its first ten volumes should be available.

We congratulate the Cooper Club on the admirable showing which this synopsis of the work of its first decade reveals, and join with other ornithologists in thanking Mr. Kaeding for adding to our library an exceedingly useful volume.—F. M. C.

[British] BIRDS IN THEIR HAUNTS. By the late REV. C. A. JOHNS. Edited, revised and annotated by J. A. OWEN. With 64 colored plates (256 figures), by William Foster. New York. E. P. Dutton & Co. 8vo. xxvi+326 pages.

In this new edition of Mr. John's work the text is brought up to date by Mr. Owen, and the publishers have added a series of drawings by William Foster, figuring every species in color. The text is readable and informing, the illustrations satisfactory, those of the larger birds particularly, showing Mr. Foster to be a bird artist of exceptional ability. The work, therefore, makes a useful handbook of British birds.—F. M. C.

MIG ROBIN: HIS STORY. By EMMA C. CRUMMER. With Illustrations by the Author. W. F. Crummer, Oak Park, Ill. 1909. 12mo. 120 pages.

"Migratoria Robin" is here made to tell the story of his youth and growth, his migrations, courtship, nest-building and home-life, together with various experi-

ences with his neighbor man,—the aim being to interest young people in bird-life through the adoption of an intimate and personal point of view. It is to be regretted that the realism of the text could not have been furthered by actual photographs of living Robins rather than by drawings, which we fear "Mig Robin" would not always endorse.—F. M. C.

WANDERINGS IN SOUTH AMERICA, THE NORTHWEST OF THE UNITED STATES AND THE ANTILLES IN THE YEARS 1812, 1816, 1820 and 1824. By CHARLES WATERTON. Including a Memoir of the Author by Norman Moore. With Illustrations and a Brief Introduction by Charles Livingston Bull. New York. Sturgis and Walton Company. 1909. 12mo. xxvi+338 pages. 16 plates in tint.

The republication from time to time of classics like Waterton's 'Travels' is an excellent reminder of the continued claims to our attention of the work of these pioneer naturalists. The present edition of Waterton is most attractive; but we think—and we believe that Waterton would agree with us—that the publishers have been unfortunate in their choice of an artist. However artistic Mr. Bull's drawings may be, they are better adapted to illustrate the tales of Kipling or fancies of Roberts than Waterton's more literal text; while the use of a colored ink, which produces species unknown to science, and the placing of the caption "Egret" under the Jabiru plate, would we imagine have been resented by Mr. Waterton with characteristic vigor.—F. M. C.

The Ornithological Magazines

THE CONDOR.—The March 'Condor' opens with an instructive paper, by H. S. Swarth, on the 'Distribution and Molt of Mearns Quail,' illustrated by a map of the bird's range in the United States and two figures showing various stages of the molt. An interesting contribution to the discussion of 'The Popular Names of Birds' is furnished by Dr. Dwight, who, with characteristic humor, shows some of the

disadvantages of dropping the possessive form of personal names, and pleads for greater uniformity in the common names of subspecies.

Mailliard describes a 'Nest of the Dusky Poor-Will,' found near San Geronimo, Cal., on July 22, 1908, and Stephens contributes some important 'Notes on the California Black Rail.' The latter bird is shown to be probably resident in the salt marshes along the coast of southern California, where it breeds in March and April, nesting in the *Salicornia*, and laying from four to eight eggs. 'Among the Thrashers in Arizona' is the title of a paper by Gilman, evidently based on considerable field work, for the author mentions five species and states that in 1908 he made notes on the nests of 1 Leconte, 27 Palmer, 39 Bendire and 45 Crissal Thrashers, in all 112 nests. Bowles 'Notes on *Parus rufescens* in western Washington' are confined chiefly to observations on the nesting habits of the bird in the vicinity of Tacoma, showing that the set of seven eggs is usually deposited the second week in May, and the number may vary from six to nine. The most extended article is Smith's 'Observations on Some Birds found in Southern Mexico,' near Cuernavaca, fifty miles southwest of the city of Mexico.

Among the brief notes should be mentioned the record, by H. W. Marsden, apparently the first for the state, of the capture of the Chestnut-sided Warbler (*Dendroica pensylvanica*), near Sherwood, Mendocino Co., Calif., September 21, 1908; and the finding by Howard Wright of the ancient Murrelet (*Synthliboramphus antiquus*), at San Pedro, Calif., Jan. 23, 1908.—T. S. P.

Book News

PROFESSOR WALLACE CRAIG, who has been for some years studying the Pigeons in Professor Whitman's columbarium, presents American Journal of Sociology (XIV, 1908, pp. 86-100) a brief preliminary statement of the results of his labors in advance of their later pub-

lication in detail, in book form. The paper treats of the social life of Pigeons during the nesting season, with particular reference to the voice as "a means of influencing the behavior of individuals, so as to bring them into coöperation, one with another."

IN 'Methods of Recording and Utilizing Bird-Migration Data' (Proceedings Academy Natural Science, Philadelphia, 1908, pp. 128-156), Mr. Witmer Stone discusses the problems which have confronted all compilers of migration records, and suggests various means of presentation in a manner which will interest all who have to do with this subject.

BULLETIN No. 3 of the Vermont Bird Club (Carlton D. Howe, Secretary, Essex Junction) contains some thirty pages of papers and notes relating to Vermont birds, the most important of which is Mrs. Elizabeth B. Davenport's 'Summer Birds of Mt. Mansfield and Region Adjacent to the Base of the Mountain' (pp. 5-12).

THE Kansas University Science Bulletin for September, 1908 (pp. 377-388), contains 'Notes on Some [40] Northern Arizona Birds', made by the author, Alex Wetmore, at Williams, Arizona, between February 24 and April 1, 1907.

'SOME Birds of Molakai' by Wm. Alan-son Bryan (Occasional Papers of the B. P. Bishop Museum, IV, No. 2, Honolulu, 1908) contains much interesting biographical matter.

WE are in receipt of a copy of the new edition of Mr. C. A. Reed's popular 'Bird Guide' (Worcester, Mass., 1909), in which the line cuts of the first edition are replaced by four-color illustrations. The result, from both an artistic and scientific point of view, is a marked improvement, the new figures being both more pleasing and more accurate than those of the first edition. It is to be regretted that Mr. Reed did not also revise the text of this useful and convenient manual and thus bring it up to the standard of his excellent plates.

THE Bulletin of the Buffalo Society of Natural Sciences (Vol. IX, 1909, pp. 134-148) contains an interesting article by Ottomar Reinecke on the Woodcock, fully illustrated with photographs by James Savage and E. Reinecke, and drawings by William Wild. The photographs are excellent and have that interest and value always attached to direct records from nature. The drawings, on the other hand, while no doubt good artistically, show what may follow when the human eye rather than the eye of the camera tells the story. Thus a Woodcock's nest is shown with five eggs, a number so unusual as to be considered abnormal, while a sketch of the bird on the nest makes it a conspicuous dark figure against a light background, instead of being marvelously fused with its background as the photographs admirably depict it.

PUBLICATION No. 103 of the Carnegie Institution of Washington contains (pp. 139-151) 'A Contribution to the Life-Histories of the Booby (*Sula leucogastra*) and Man-o'-War Bird (*Fregata aquila*)' by Frank M. Chapman, in which it is claimed that Audubon's record of the breeding of this Booby in the Tortugas was based on the Red-footed Booby (*Sula piscator*) and that there is no authentic record of the breeding of the Man-o'-War Bird in Florida.

'THE Crow as a Menace to Poultry Raising' is the subject of a paper by Leon J. Cole in the report of the Rhode Island Agricultural Experiment Station for 1908 (pp. 312-316). Doctor Cole expresses his belief that while some Crows may destroy the eggs and young of poultry, we should not for that reason offer a bounty on Crows, but should leave the matter for local adjustment "for in those localities where Crows are proving harmful this should in itself act as an incentive for lessening their numbers, while if they are doing no harm or are perhaps of benefit in other places, a bounty will work against its own ultimate ends, namely, the interests of the agriculturist."

Bird - Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

MODERN nature study, according to its leading exponents, is merely natural science for young folks; and your true teacher of nature study aims to be as accurate in opening the the child's mind to the wonder and beauty of natural laws as he would attempt to be in presenting the results of original research before a body of his peers.

Nevertheless, we are told by a writer in the May issue of the 'Nature-Study Review,' that "the aim in nature-study" is to arouse "sympathy for all that is good in life" without regard to whether such sympathy be based on "fact" or "fiction." In other words, the true story of the marvel of life, in all its endless manifestations, is not in itself sufficiently marvelous, but must be supplemented by the products of minds in which imagination vainly strives to make up for ignorance.

No teacher familiar with the known facts in bird-life will ever feel the necessity of resorting to fiction to stimulate the interest or arouse the sympathy of children in the real bird; and it should go without saying that the real, lasting value of the knowledge on which such interest and sympathy is based is in direct proportion to its accuracy.

It is rather unfortunate that the editor of the 'Bulletin' of the New York Zoölogical Society should state, in the June issue of that publication, that, "even down to 1896, the scientific ornithologists of

America, as a body, had done *absolutely nothing* in the cause of bird protection." Wholly aside from the exhibition of a personal animus which this statement obviously exhibits, it is untrue.

Any one who writes on the subject should know that the present bird protection movement in this country originated with the American Ornithologists' Union, which, in 1885, the year after its organization, appointed a "Committee on the Protection of Native Birds," with William Brewster as chairman. From this committee sprang the first Audubon Society. Its Bulletin No. 1, published in 1886, is still one of the most effective and convincing documents in relation to bird protection which has ever appeared; while its Bulletin No. 2, published later in the same year, contained the first draft of what has since become widely known as the A. O. U. 'Model Law,' and which is now in force in nearly every state and territory of the Union.

Since the dates mentioned, the members of the American Ornithologists' Union have led the fight for the better protection of our birds. It was the A. O. U. committee, under its chairman, William Dutcher, which dispensed the Thayer Fund, and largely from this phase of the committee's work the National Association of Audubon Societies developed. Every director of this Association is a member of the American Ornithologists' Union; and all have taken an active part in bird-protective work.

Let us also remember that, in 1883, at the first meeting of the American Ornithologists' Union, there was appointed a committee, with Dr. C. Hart Merriam as chairman, which two years later, as a result of an appeal made by the Union to Congress, became the Division of Economic Mammalogy and Ornithology of the United States Department of Agriculture, and is now the Bureau of Biological Survey. To the "scientific ornithologists" who compose this Bureau we are indebted for fully 90 per cent of the facts on which any logical, effective plea for the conservation of bird-life must of necessity be based.



HOUSE WREN

Order—PASSERES

Family—TROGLODYTIDÆ

Genus—TROGLODYTES

Species—AËDON

THE HOUSE WREN

By MABEL OSGOOD WRIGHT

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 39

SINCE the work of bird protection has become a matter of international interest, we have heard a great deal of vanishing species and of the discouraging side of the matter, while far less has been said about the increase of certain species of our most familiar birds, which can be still further augmented by a little care.

We cannot prevent, if we would, the trend of civilization that drains and reclaims the marshes and swampy woods dear to the water-fowl and so-called shore-birds. We cannot check, or even guide, the over-thrifty forestry that does away with the moss-grown stumps—picturesque in their decay,—and fills up with cement every crack or knot-hole suitable for Owl, Chickadee, Nuthatch, or Woodpecker; but there are a dozen birds still abundant upon which we depend for home music, the concerts of the garden and nearby fields, and it is possible to keep these with us indefinitely if we only see that suitable nesting-places are left them, or lacking these, provide substitutes.

Rare species may grow rarer, to the despair of the ornithologists who desire to collect them for the purpose of study or exchange. The Ruffed Grouse and Quail are disappearing from many old-time hunting-grounds, but hereabouts, this summer, the dozen species of song birds upon which we depend were never more numerous or in better voice.

Run over this list and you will find that it furnishes both soloists and the chorus: Wood Thrush, Brown Thrasher, Robin, Catbird, Song Sparrow, Goldfinch, Baltimore Oriole, Rose-breasted Grosbeak, Meadowlark, Bobolink, Red-eyed Vireo and, last and least in size, though not in importance, the House Wren.

You may not be able to offer the Brown Thrasher the bit of thick brush that he loves, the Oriole a high swaying elm or the Meadowlark and Bobolink a field that either remains uncut, or where the haying is delayed beyond nesting-time, but very cramped and bare must be the suburban home that does not offer the Robin and the House Wren a lodging. As for the latter bird of the keen eye, sharp tongue and eloquent tail, there is positively no excuse for being without one or more pairs of them.

The family of Mockers and Thrashers to which our House Wren, together with his numerous cousins of tropical America, belongs, is a most interesting one, and though containing two distinct sub-families, the species of both have strongly marked characteristics in common. While the Mockers have the greatest

reputation as colloquial vocalists, the Thrashers have almost the same ability even though their songs are less sustained; and the songs of our native Wrens equal either in volume, if the size of the bird is considered.

There are eight species of Wrens locally common to the United States east of the Rockies, whenever the region is thickly brushed enough to suit their necessities, and of these three Bewick's and the House Wren are sufficiently sociable, not only to prefer to nest near homes, but to quickly take to nesting-boxes in preference to the usual crannies and tree holes or the brush heaps in which they spend so much time creeping to and fro, sometimes in pursuit of insect food and sometimes it seems in a spirit of pure restlessness.

On some morning in the last week in April, preferably after a night of rain with wind, we come to consciousness with the knowledge that the morning song is pervaded by new tones. Presently the voice of the Thrasher is heard giving direction to an imaginary gardener about his planting; the Catbird has once more possessed himself of his point of vantage on top of a clothes-post; the Wood Thrush sings from the dogwood on the edge between garden and woods, and an unrepeatable burst of melody from the corner of the porch close under the window draws your attention to the little reddish, olive-brown bird balancing there, with tail and eyes turned skyward, though you know before you look that it is Johnny Wren who has returned, and that, pert as he looks, he will be very soon taking housekeeping orders from the Jenny of his choice.

In a day or two Jenny, or rather a number of Jennys, will appear, and then follows a month of the most active courtship in the world of song birds. Active? I had almost said quarrelsome, for such it usually seems; but then a mere human being may not be able to distinguish between Wren repartee and the actual "back talk" of real anger.

Whichever it may be, the pastime occupies nearly all the month of apple-blossoms, the serious nest-building not beginning until the last week of May, in spite of the fact that a pair of House Wrens have been known to rear three broods of six each in a single season.

For prolific birds such as these, whose cleanly habits lead them to prepare a new home for each brood, it will be seen that the possibility of finding suitable nesting-places is a matter of the first importance, as for such ardent insect eaters the food supply is always at hand during the season—from April to October—that they are with us.

The old-fashioned farm was the Wren's paradise, as well as that of the Barn Swallow, Chimney Swift and Phoebe; though the barn buildings were frequently too close to the house for the best of human sanitation, and the various appurtenances were collected with a view of "being handy" rather than with an eye to order and precision. Here Jenny and Johnny would locate their first nest in an empty tin can upon one of the cowshed rafters, filling all the space not absolutely needed by a mass of small dry sticks; for, above all things, the Wrens seem to esteem coziness, and if a nook or apartment has too high a ceiling they immedi-

ately do away with this objectionable feature by raising the floor. It is well to keep this requirement in mind when making Wren boxes. A house 4 x 4 x 6 inches, with a sloping roof to shed water and an opening two inches from the bottom, and not more than one inch in diameter, will not only meet all requirements but help to repulse the innocently pestilent English Sparrow.

The six or eight purplish brown eggs, sometimes darker at the larger end, in due course turn into little birds that require a deal of tending; and so rapid is the process of digestion with these very warm-blooded animals that the excreta is removed almost as fast as the food is supplied and, strangely enough, appears to exceed the food in bulk; but then it must be remembered that the food is of the most highly concentrated and nutritious animal matter.

What a thrifty housewife Jenny is! Not a speck or splash is allowed to drop near the dwelling, and often before the nestlings have actually taken wing, she is varying her marketing trip by a hunt for dwelling number two.

In searching the outbuilding sacred to tools and general litter to be "mended some wet day," for the little bags of spider eggs that are so very appetizing to mother bird as well as the children, Jenny spied an old stone jug that had gone once too often with cider to the hayfield and come in contact with a rock. Badly cracked but not broken, it was pushed back on the shelf, neck out. At once curious and restless Jenny explored the short neck and, finding it much to her liking, sent Johnny to collect twigs for filling the unnecessary space while she finished preparing her youngsters to take wing, finding it convenient to leave an egg in the new nest before she had quite shaken off the care of the first family.

Whether the cider-jug home was too hot, or whether the mice with which the tool house was filled became too inquisitive, this second home was abandoned after a few days of incubation. On breaking the jug to see what had happened to the eggs after the Wren had flown off to find new quarters for a third venture, evidence pointed to the bird or birds having destroyed their own eggs in a fit of temper or disgust at their surroundings. Each egg was perforated by a single sharp thrust that could not have come from the teeth of a mouse, and the contents of the egg had not been otherwise disturbed.

Such a state of things I once practically saw happen under my very eyes, though, lacking color distinction, I could not tell whether the male or female was the egg-piercer. The nest was in a small house in the porch vine. One morning, a few days after incubation had begun, the return of one bird was heralded by violent scolding on the part of the one sitting. Then both flew about lunging at each other and fighting desperately. One bird, rather worsted, stopped to rest, wings spread and panting, when immediately the other flew into the house and proceeded to scratch and break the furniture. Then this one came out and flew away. Next day neither appeared and I found the eggs pierced each with a single thrust.

The third nest that the old farm Wrens built was inside the north window-blind of the best room of the farmhouse, a window seldom opened between

spring and fall house-cleaning. As it was then the first week in August, the location, sheltered alike from sun and thunder-showers, was evidently appreciated. This third brood, to the number of five, prospered.

It can be easily seen by those who wish to have Wrens about their places that house-room must be provided, as the English Sparrow is likely to take to himself many of the old haunts. However, the box with the one-inch opening is as yet a problem to the Sparrow, or the red squirrel, though the latter can and will enlarge the hole unless it be edged with tin. Make your houses of the right size, not one or two, but a dozen. Think out the location and see that they are at least partly protected from sun. Do not put the houses too close together, Madam Wren is a bad neighbor and her temper is as quick as her flight.

At the end of the season clear the old nests from the house. A Wren can carry and lay unbelievably long twigs, but to undo the work is too great a trial of patience. Last year a series of a dozen of my Wren boxes remained unoccupied because they had not been emptied. Nests in nooks and corners fall apart in the wind and winter weather, but those in houses stiffen and are hard to remove even with human fingers, unless the roof of the box can be unhooked.

Under proper auspices the House Wren is increasing, and if it is not doing this in your neighborhood may it not be your own fault? Once established in a locality, the Wren clings to it. This year, other space failing, a pair have made a strange nest in a house-maid's pail that was hung, bottom upwards, to air on a stake behind a trellis where they had once nested. The pail had a slightly incurved edge and between this and the supporting stake they built a narrow platform up toward the bottom of the pail, which acted as a roof. The structure was made of sticks, which it seemed impossible that so small a bird could lift, much less turn endwise and carry through the round meshes of the trellis. The nest when finished was of the shape of that of the Eave Swallow, the supporting stake holding it against the side of the pail.

"What shall we do?" I said to the maid, on being shown the nest, which was well outlined between the morning and the evening of the first day. "My, but the work of them!" was her admiring reply. "Leave them have it; I can do with something else, for it's a sin to discourage that much pluck when it trusts you for the lend of the pail."

More of this spirit will mean many more Wrens about our houses.

Questions for Teachers and Students

What are the common song-birds of your neighborhood? Are they increasing or decreasing in numbers? What can we do to assist in their increase? When do you first see the House Wren? How long does it remain? When does it begin to nest? In what kind of sites have you found nests? Of what is the nest composed? How many eggs are laid? How many families are raised in a season? On what are the young fed?

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 141 Broadway, New York City

A Reason Why the Trade in Aigrettes Should Be Suppressed

During the summer of 1908 two small colonies of Snowy Egrets were discovered on the South Carolina coast and every effort was made to give them complete protection. Notwithstanding all that was done, both of these rookeries were "shot out" quite recently. The perpetrators of the outrage were discovered and warrants were issued by a magistrate, at the instance of the South Carolina Audubon Society's warden, for the arrest of Arthur Lambert (white) and Robert Green (colored) charged with trespass and with shooting Egrets. The warden and constable of the Trial Justice found these two men on a steamboat and when they attempted to arrest them, the captain of the boat refused to allow the arrest to be made upon his vessel. The constable thereupon took passage on the boat with the idea of arresting both men when they landed. Just before the boat reached the landing where the men were to get off, Lambert took a life preserver and jumped overboard and swam to shore in a swamp. On arriving at the landing where the negro got off, the constable was unable to serve his warrant without its being countersigned by the nearest Trial Justice; it being in a different district. By the time this had been done the negro also got away.

The warrants have now been placed in the hands of the sheriff of the county for service. One of the colonies raided consisted of about fifty birds, of which only twelve escaped.

The Aigrette dealers of New York City claim that no North American stock is used. The above incident, however, shows that, whenever and wherever White

Egrets are found in this country, they are at once killed for the millinery market, and until the sale of Aigrettes is absolutely prohibited, the few remaining Egrets are in danger and the two North American species cannot escape extermination.—W. D.

The Brown-tail Moth

At the hearing in March on the Francis Bill, the Forest Fish and Game Committee of the Assembly were told by Mr. Forbush, Ornithologist of the state of Massachusetts, and by the President of the National Association, that in a short time it was probable that both the Brown-tail and Gypsy Moths would be found in the state of New York, and this Committee was warned in the most positive language that should these pests become established in this state, that future Legislatures would, within five years, be called upon to appropriate hundreds of thousands of dollars each year to fight these pests.

When this warning was given to the Committee, it was little thought that within a few weeks that one of these pests would be found in the state. In the 'New York Times' of July 1, there appeared an editorial entitled "Fight the Brown-tail Moth," in which it stated that this moth has now appeared in the state, and it urges the Agricultural Department to be lavish in spending money to exterminate it.

This incident shows very forcibly how great a wrong was committed by the last Legislature of the state in defeating the Francis Bill. Larger numbers of wild birds will be a more effective means of stamping out these pests than any other method.—W. D.

Law Enforcement in Oregon

Last February the Oregon Audubon Society sent out warning notices to all the milliners of the state calling attention to the decision rendered by the Supreme Court of the United States in the *Silz* case, and stating that hereafter action would be taken against any firm having in possession for sale any part of the plumage of Herons, Terns, Gulls, Grebes, Ibis and other birds protected under the statute. Although the Model Bird Law was passed in Oregon in 1903, the milliners had claimed the right of selling plumes that were imported, because the law did not state specifically that it was unlawful to sell plumes "whether taken within or without the state."

In addition to the warning notices, the matter was given publicity in the various papers, but the milliners paid no attention. On April 2, Mr. William L. Finley, President of the Oregon Audubon Society, arrested ten of the proprietors of the leading millinery establishments of Portland and seized a quantity of plumage as evidence. On April 6, the two leading department stores of the city, Lipman, Wolfe & Co. and Meier & Frank, although arrested the first time, failed to withdraw all the forbidden plumage and were again arrested. The following week when these cases came up for trial, all the milliners pleaded guilty. In view of the fact that they promised to ship out of the state within two weeks all plumage that is forbidden under the law, and since the largest firms showed telegrams and letters countermanding orders for fall aigrettes to the extent of several thousand dollars, a nominal fine of ten dollars was imposed for the first offense and twenty dollars for the second.

In order to protect the few remaining White Herons in southern Oregon and to give protection to Grebes, Terns and other birds nesting on Klamath Lake Reservation and Malheur Lake Reservation, the Oregon Audubon Society recently raised a fund of \$300 to assist the National Association in paying for warden services

in this part of the country. Mr. L. A. Lewis, of Klamath Falls, has been appointed warden in charge of Klamath Reservation, and Mr. Claude Hibbard, of Burns, has charge of Malheur Reservation. —WILLIAM L. FINLEY.

Report of Warden of Klamath Lake Reservation. Month Ending May 31, 1909

Conditions on the reservation have been satisfactory during the month just ended. In not a single instance have I learned of a hunter being on the Government lands of the Reservation. Hunters seem to be afraid to violate Government regulations on the reservation and keep off entirely.

I have spent, during the month, twenty-two days patrolling the reserve, and the balance of the time working on cases on the border of Oregon and California, assisting the game wardens of the two states. No arrests have been made this month, but one or two cases are being worked up under the state laws, in which I believe arrests will be made shortly.

During the month I have made a discovery of by far the largest Pelican colony on the reserve, in a place I never expected to find nests. I had noticed many Pelicans flying around this portion of the reserve, but supposed, from appearances, it was merely a fishing-ground. There were at least 1,500 nests in this colony, together with 400 or 500 Cormorant nests. I have found altogether on the reserve at least 600 Blue Heron nests. Very few Grebe are nesting on the reserve this year—mute testimony of the inroads of previous market hunting. A few Gulls and Terns are also nesting, but very few. No Caspian Terns have appeared, as far as I have noted.

Various parties, amounting to about sixty people, have visited the bird colonies, but only when I was on hand, as I have made it a point to see that the birds were not disturbed. The birds, especially Pelicans, are very tame, and it is possible to get as close as ten feet to nesting Pelicans.—L. ALVA LEWIS, Warden.

News from Texas

During a full term and two extra sessions, the Texas Audubon Society maintained a committee at Austin for work with the Legislature, seeking betterments of the Texas bird and game law, and making a strong fight against the enactment of objectionable amendments, several of the latter having been offered with rather formidable support. In procuring amendments for the improvement of the law we cannot claim to have been very successful, for we lost all we asked for, except one, which provides for a residence license fee, to go to the support of the state warden system. Otherwise, the bird and game law remains unchanged, and it is good for the purposes, having withstood all the tests of the courts.

We asked for a provision under which the Bureau of Biological Survey of the United States could send its experts into the field to take birds for scientific purposes, at all seasons. We also asked that this clause should permit an expert each representing four of the most important universities of the state to take birds for the purpose of stomach analysis in the interests of science, and for the benefit of the farmers. That was an important amendment, and it was lost, although it was properly safeguarded. The privilege of taking birds for scientific purposes under the law enacted in 1903 was abused, and it was impossible to reconcile the Legislature to the enactment of such an amendment, however much it might be hedged about with conditions absolutely preventing abuse. In the matter of the residence license fee, we asked that it might cover the entire state, and apply to all gunners, even such as should shoot on their own premises. Such a provision would have eliminated a hoard of objectionable shooters, using cheap guns, but we could not make the Legislature see it that way. The resident license amendment exempts persons in their home counties and in the counties adjacent to their home counties. Nevertheless, it will do a world of good, and if the license fees are all

collected it will add not less than \$50,000 to the state game warden fund, and this ought to extend actual and efficient protection throughout the state.

We defeated the annually recurring effort of the market hunters to open up the markets for game, and, in doing so, we gained a great battle, for the attempts of the market hunters were strongly backed by misguided and misinformed citizens and the fight was a hot one.

The series of lectures conducted by the Texas Audubon Society for over three years had a wonderful effect, and much good came to our cause from the visit to Texas, during the session of the Legislature, of National Secretary T. Gilbert Pearson, who lectured in the Auditorium of the University of Texas, giving stereoptican views while the Legislature was in session. Mr. Pearson also visited Mexico, and started a movement in the trans-Rio Grande republic which is already being felt in the coöperation of the bird protectionists of Mexico, along the Texas border.

During the session of the Legislature it is estimated that over five thousand letters were written to state senators and representatives by Audubon men and women of Texas. All these agencies, brought to bear at the proper time, had wonderful effect, and as we are continuing the work we firmly believe that when the next Legislature meets we will make a still further advance. We are delighted to state that from the time the Texas Audubon Society took up the fight there has been no retroversion in the march for the protection of the wild birds and animals of this colossal state.—M. B. DAVIS, *Secretary*, Texas Audubon Society.

Mosquito Inlet Reservation

Everything is going on very nicely on the reservation; we have hatched and raised a large number of birds this year, as there have been no storms to destroy the young birds. We have a specially nice lot of Least Terns. The only enemies of the birds are a few skunks.—B. J. PACETTI, *Warden*.

A Resolution

May 24, 1909.

AMERICAN MUSEUM OF NATURAL HISTORY, NEW YORK.

Dear Sir: I have the honor to inform you that at the meeting of the Trustees of The American Museum of Natural History, held May 10, 1909, the following resolution relative to the protection of birds, was unanimously adopted:

Resolved, That in view of the decrease in the numbers of our native birds through their destruction by millinery and market hunters, by foreigners, by sportsmen, and indirectly by the advance of civilization in claiming their haunts, and further, in view of the great and growing economic value of birds as increasing population creates added demands for their services as the destroyers of noxious insects, rodents, the seeds of weeds and as scavengers, and also because of the rapidly developing interest in birds as "the most eloquent expression of nature's beauty, joy, and freedom," the Trustees of The American Museum of Natural History heartily endorse the movement of the Audubon and Zoölogical Societies designed to protect birds and to diffuse a knowledge of their economic and esthetic value to man.

Very respectfully yours,

J. HAMPDEN ROBB, *Secretary*.

MR. WILLIAM DUTCHER, National Association of Audubon Societies, 141 Broadway, New York City.

A Plea for the Sharp-shinned Hawk

The writer wishes to enter a mild protest against certain parts of the leaflet on the Sharp-shinned Hawk recently published by the National Association. In discussing the economic status of this species, it seems to me that the destruction of song birds should be considered quite apart from the destruction of poultry. The former is of interest chiefly to the bird-lover, the latter to the raiser of fowls.

The destruction of small birds, by which the Sharp-shinned Hawk mainly exists, does not seem important from an economic

point of view, for their numbers cannot increase beyond a certain limit, except by the food supply. The present abundance of small birds is probably at about this limit.

It is a well-known fact that every species of bird is constantly tending to increase at such a high rate that it is necessary that there be some check to their numbers. This check is found largely in the shape of predatory animals, such as Hawks, and if these were exterminated, large numbers of small birds would have a difficult time obtaining food and many would doubtless perish from starvation. The Robin may be used as an illustration of the rapid rate at which birds tend to multiply. Every year each pair of Robins tries to raise two broods of four young each. To be conservative say that the yearly average of each pair is only four young. At this rate there would be, at the end of the tenth year, 118,098 Robins, and at the end of the twentieth year over 20,000,000,000, all the progeny of one pair.

No doubt it is necessary and right in order to secure the protection of the law for the "beneficial" Hawks, to definitely point out to law-makers and farmers which the bird-eating species are. But it does not seem right that the opportunity should be used to endeavor to prejudice bird-lovers against the Sharp-shinned Hawk by calling it a murderer and a "convicted felon."

The Red-shouldered and other mouse-eating Hawks are just as much murderers as the Sharp-shinned Hawk, and it seems to the writer that unless the human critics of the Hawk happen to be vegetarians they are worse in this respect than the Hawk. The author of the leaflet says: "Its trade is battle, murder and sudden death, and unfortunately the greater number of its victims are the weak and defenseless young of game birds and poultry, and the beautiful and useful songsters of field, farm, grove, orchard and forest."

This certainly makes it look very black against the Hawk at first sight, but when we reflect that the wild birds taken by the Sharp-shin must necessarily perish in one

way or another, is not the "sudden death" inflicted by the Hawk as good as any? Also, it is not apparent just why it's so unfortunate that the Hawks' prey are the "weak and defenseless young." It is certainly better that the young be captured rather than the parents, and better that they should be defenseless, else a battle would ensue each time the Hawk captured its prey.

Judging by the writer's own experience, the account related by Mr. Forbush of the destruction and driving away of birds near his home by a pair of Sharp-shinned Hawks is highly unusual. Most of the Hawks' hunting is done at some distance from the nest, and I have always found small birds abundant in the vicinity.

In most parts of the eastern United States this species is almost a rare bird in the nesting season, and for this reason the breeding birds can do little harm to farmers in general. The discovery of the nest of this little Hawk is an event to delight the heart of the bird student, as this gives one an opportunity to become intimate with the species that can be gained in no other way.

While it is too much to expect the average farmer or sportsman to lose any opportunity of destroying the Sharp-shinned Hawk, let nature-lovers personally give it the same protection that they give to other beautiful and interesting forms of life.—W. DEW. MILLER, *New York City*.

Our Duty to Our Bird Tenants

EDITOR BIRD-LORE: I noticed in our bird magazine, not long since, the seemingly kind offer of free leaflets, on "how to attract the birds to our homes." On top of this offer I put the following parable: "Several small children were playing in front of a lady's house. She, being a lover of little ones, persuaded them to come into her yard to play. Then through some home duty, she was called into her house. Soon terrible screams caused her to rush out again. What a sight met her vision! On the ground bleeding and

torn of clothes and flesh lay two of the little ones, over them growling and snapping, stood the next-door neighbor's bull-dog. He had squeezed himself through a hole in the lady's back-yard fence, which she had neglected to repair. His dislike of children caused the dire calamity.

The wounds, together with the nervous shock, resulted in the death of one of those helpless, trusting children. That lady, whether she recognized the fact or not, was certainly one of the means toward that death. She gave those little ones the impression that her yard was not only a pleasant spot, but also a safe place to stay. Her thoughtless neglect to first make it safe before inviting in the children resulted in that terrible pain and that death."

For eight years, I have had the opportunity, possessed by few, of studying bird life, and I warn, solemnly warn, our Audubon Society, there is a hole, a very large hole in its back-yard fence, and the birds by thousands are going to their death, through our neglect to first attend to that hole before we attract them to our homes.

By putting up boxes for nests, by feeding the birds, we plainly say to them, "Our yard is a pleasant, safe place to stay." We are too busy to watch them continually; the result, our little pets suddenly disappear altogether, or we come across portions of their mangled forms or bunches of their feathers on our lawns.

We, in this neighborhood, have absolutely no trouble in persuading the birds to come. Our trouble consists in keeping them after they do come. It seems but natural for them to pass over this well-wooded strip of land bordering on Lake Michigan, when migrating to their summer and winter quarters. When unmolested, they remain weeks with us; many of them decide to stay as long as the weather permits. But alas! their decision only means their death through the hole in the fence—cats!

We are a community of homes, lovers of flowers and birds. Unfortunately every

now and then "renters" move into the neighborhood, bringing with them their cats. This spring, just a stone's throw on the north from one of my Warbler boxes, came five cats in this manner. About twice as far on the south, lives a renter with six cats. With such odds to meet, I feel safe in saying, only a miracle performed by the Lord can save the lives of that pair of birds and its brood when hatched.

It is said, upon good authority, that, were all the birds suddenly killed, in seven years, man would be unable to exist upon this earth, the increase of insects and worms would be so great. Birds then, being of such untold usefulness to man, ought to have the help of the law to protect them from their terrible enemy, cats.

I positively know of birds by the hundred that have been destroyed by my neighbors' cats, and have grave fears that if we as a Society do not soon do something to prevent this terrible slaughter, we who live in or near cities will not know what a bird looks like, except through Sparrows. This class of birds is the only one that can multiply fast enough to keep ahead of the work of the civilized (?) cat.

I fail to understand why cats are not taxed as well as dogs. Were they taxed, it would put a vast number out of commission, and thus would the lives of countless birds be saved.

Just a few words in conclusion. Some have accused me of being prejudiced against the cat. These accusers argue "the cat is God's creature, as well as the bird, the one has as much right to life and freedom as has the other."

I cannot blame the cat for his misdeeds. It is as natural now in his perverted state to kill birds as it is for him to breathe. No fence is high enough to keep him out of our yard. He scratches out our seeds, destroys plantlets, ruins rare plants, causing us waste of time, strength and money. It certainly is not a feeling of injustice toward the creature to wish him out of existence or so restrained by his owner as to be impossible to interfere with our interests; and it is simply my

honest belief that if people willfully or thoughtlessly so far fail to live up to the Golden Rule as to harbor uselessly that which causes losses, distress of mind and pain of heart to those living near, then in some manner the law should protect and aid the party being injured thereby.—
MARTHA W. BARROWS, *Chicago, Ill.*

Bird Day in California

Mrs. Alice M. Park, Chairman Humane Education Committee of the California Club, writes that the effort to secure a law establishing Bird Day in California was successful, although the law was not secured until after a third and determined effort had been made. The bill was signed by the Governor in time to hold the first Bird and Arbor Day celebration on March 7th of this year. The time between the signing of the bill and the day fixed for the celebration was so short that its observation was not as complete throughout the State as it is hoped to make it in future years.

Practical Work

At the suggestion of the Ohio Audubon Society, the boys in the Sixth Grade of the Public Schools in Cincinnati have made 1,200 bird-boxes which will be distributed in the parks of that city. Most of the boxes are for one pair of birds; however, some of them are apartment houses for the use of Martins. It is reported that the boys have entered with great zest into this work. A twofold good is accomplished; first, the boys are interested in practical bird protection, and, secondly, an additional number of birds will be attracted to the parks.

The South Carolina Society

The indications are that Secretary Rice's campaign in Charleston will add about three hundred new members to the Audubon Society; he reports considerable enthusiasm amongst the business men and others in that place. The Society is in good shape and is growing in popularity every day.—B. F. TAYLOR, *President.*

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Notices of changes of addresses, renewals and subscriptions should be sent to
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LITERARY NOTE

The September-October number of BIRD-LORE contains its usual variety of articles interesting to bird lovers. The lively courtship of a pair of Black Ducks is related by one who was fortunate enough to witness the singular performance. In 'Woodpeckers and June Bugs' are described the habits of Woodpeckers and the peculiar manner in which they prepare insect food for their young. 'A Successful Failure' treats of the nest-building habits of the House Wren, and the difficulty of providing him with a nest-box to his liking. Another article describes the methods adopted by Hawks in the pursuit of their prey. 'Two Warbler Photographs,' 'The Hanging Home in the Old Tree,' 'Blue Jay Boarders,' and Educational Leaflet, 'The Bush-Tit,' together with the usual Notes, Reviews, etc., make up an exceedingly interesting number.

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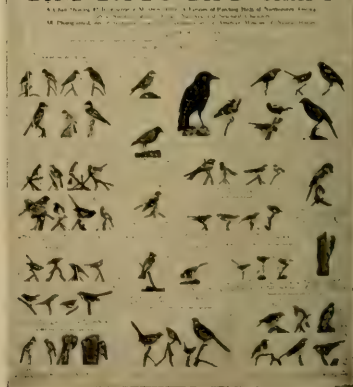


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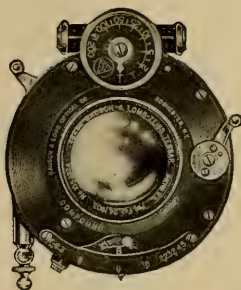
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THE BLACK DUCK'S COURTSHIP FLIGHT

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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XI

SEPTEMBER—OCTOBER, 1909

No. 5

The Courtship of Black Ducks

By EDMUND J. SAWYER, Schenectady, N. Y.

Illustrated by the author

ON April 16, 1908, at Hogansburg, N. Y., two Black Ducks began to appear regularly in early morning in a rather more secluded part of the pastures. The ground here was more closely hemmed in by woods. Several ponds, the largest covering half an acre, with numerous cedar and willow bushes intervening, attracted the birds.

One morning, just before sunrise, these Ducks treated me to a spectacle as fine as any it has been my lot to see in the bird world. It was about a quarter of five when, as I neared the ponds, seven or eight Black Ducks flushed a hundred yards ahead. After watching them circle off out of sight, my back being then turned to the pond, I glanced about just in time to see two Ducks dropping into the water. A minute later, a bunch of five or six more flew into the same pond. I crept from knoll to knoll until, at a distance of perhaps one hundred and fifty feet, I could see the birds, and plainly hear their quacking, which was almost continuous for a quarter of an hour; then it quickly ceased. Some of the birds were swimming about; others preened or quietly fed near or upon the bank. Most interesting were the actions of one pair that, from the time the flock came, constantly raced from end to end of the pond, one bird closely pursuing the other. Now and again the chase became too hot, and the leading bird in a thrilling swirl of water rose several feet into the air, followed immediately by the other. Toward the farther end of the pond, they would splash into the water, soon to take wing again in the opposite direction. As, with necks stretched far out and downward, the pair flew half the length of the pond—two or three rods—while the other Ducks looked quietly on or went indifferently about their feeding, making the water dance till it seemed alive with Ducks, the scene was really spectacular. Again and again I heard the pair of Ducks break from the water, and the *splash, splash*, as they dropped into the pond again. Each time they rose, it seemed as though they must discover me, for at such times I was in open view, had they glanced in my direction. On other occasions, I have

frequently noticed the evident blindness of Ducks when they are about to alight in the water.

This scene continued for half an hour. Then I made the conspicuous mistake of walking forward, to flush the Ducks. The next morning I waited in an improvised blind on the shore of the pond. A natural growth of low cedars, just in the right place, needed little thatching for this purpose. My camera was mounted on a tripod in the water, and carefully hidden. Not a duck appeared in this particular pond. I was forced to be content with the sketches I had made the day before.

Woodpeckers and June-Bugs

By A. V. GOODPASTURE, Nashville, Tenn.

THE Redheaded Woodpecker is one of the best-known of our birds. His colors are decided and striking, being sharply defined markings of red, black glossed with blue, and white. He is proud of his plumage, and, in his gay and frolicsome flights, displays it in the most conspicuous manner. He loves our lawn at Dudley, because it is a place of refuge, in whose oaks and maples he may flaunt his finery, and rear his young with none to molest or make him afraid.

On July 3, I found a nest a pair of them had excavated in the dead branch of a black-jack that stood beside the walk. They had just completed the process of incubation, and were carrying off the broken shells, which they dropped mid-flight at a safe distance from the nest. I witnessed their arduous labor in feeding their brood. Every five minutes by the watch, with only slight variations, one of them appeared with something in its mouth. Though I had a good glass, I could not make out what it brought. The natural food of this Woodpecker is insects, their eggs and larvæ, but they are also fond of fruits and berries in their season. While I was sure it was neither of the latter, I could not tell on which of the former they were feeding. Following closely their movements, I discovered this interesting state of facts:

On the farther margin of the road that passes just outside of the lawn, there is a row of young maples. One of these had been broken off by the storms of the preceding winter, leaving a shivered stump some four feet high. When one of the Woodpeckers came in, it did not go directly to the nest, but always alighted first on this stump, where it hammered away for a time, then proceeded to the nest with a shapeless mass in its beak. My glass having failed to disclose their object in thus lighting and hammering on the stump before feeding their young, I went down to reconnoiter. The place looked like a field hospital after a severe engagement. There were wings, and wing-covers, heads and legs strewn around the stump in great profusion. Then I understood it all. The stump was their meat-block, and they were preparing the food for their young by removing the

hard and indigestible parts. They dispatched this work with much dexterity, without using their feet to confine the insect; they laid it on the stump, and, with the bill alone, succeeded in removing the undesirable parts.

The kinds of insects whose remains were found there was a study. They were almost as gaudy as the Woodpecker himself. A pair of democratic English Sparrows were rearing a brood near by. I saw them feed their young a hundred times a day, and every time they brought a plain grasshopper, which the neighboring field supplied in unlimited numbers. But the grasshopper formed an insignificant part of the diet of the aristocratic Woodpeckers. Woodpeckers can undoubtedly distinguish between colors; they find the ruddiest apple and the rosiest peach in the orchard. In like manner, they seem to be attracted by brightly-colored insects. They prefer beautiful butterflies, silky moths, and brilliant beetles. The favorite food of this pair was the June-bug; not the plain brown beetle of the northern states, but the beautiful green and gold June-bug of the South,—associated in the mind with sultry summer days, and ripe blackberries, on which he feeds. He is the delight of the small child, who harnesses him by a thread, when he promptly takes to wing and hums and buzzes gloriously at the end of his tether. He never sulks nor tires. Sometimes, by a sudden tack, he entangles himself in the golden curls of his captor, or wraps his cord around its little bare legs. But, free him from his entanglement, give him a gentle swing around the head, and he is off again at the circumference of his circle. He is unrivaled in the child's affections, even by the lightning-bug, which he chases so gleefully in the twilight of a summer day.

I found not only the dismembered wing-covers of the June-bug around the Woodpecker's meat-block, but, in a pit on the splintered top of the stump, I found a live June-bug. And what a prison he was in! It was a thousand times worse than the Black Hole of Calcutta. They had turned him on his back and pounded him into a cavity that so exactly fitted him that he could move nothing but his legs, which were plying like weaver's shuttles in the empty air. I always found the June-bugs deposited on their backs, and always alive. The next maple beyond the stump had a small scar on the side, over which the bark had not entirely met, leaving a fissure a little wider at the top than at the bottom. In this fissure they had deposited two June-bugs, with their backs to the tree. The lower beetle they had forced down into the fissure until they were unable to recover him when wanted, and were forced to take him out piecemeal.

Wishing to see if they would allow their young a berry or a bit of fruit, I brought from the orchard and deposited on their stump a peach and a bunch of ten blackberries. Next morning the old birds consumed them all for their breakfast; but the little ones were not allowed so much as a taste, being strictly confined to an insect diet.

A Successful Failure

By NORMAN McCLINTOCK, Pittsburgh, Pa.

With photographs by the author

NEXT to the much-despised English Sparrow, there is possibly no wild bird that has become more domesticated or is better known than the familiar little House Wren. Partly depending for protection, as he does, upon the smallness of his size, with his consequent ability to squeeze through a hole that will block his fighting English foe, the House Wren is able to hold his own in the presence of that feathered ragamuffin. So it is that the House Wren readily adapts himself to the little box which our loving hands may erect for him close to our dwellings. I say "readily adapts," because I have always read and heard that this is the common experience of bird-lovers. Not so mine, however.

I think it was about six years ago that the success of my friends with Wren boxes, and the many printed references which I had seen at various times as to the simplicity of erecting, in a suitable spot, any sort of a receptacle, from a fancy and ingeniously designed box to an old tin can, with the assurance of success, if the spot be within a Wren zone, led me to build a small house and to placard it with signs reading, "To let, upon the easiest terms; inquire within." At least, I intended the signs should read something like this in the Wren language, but, as you will see, I must have made a serious blunder in my phraseology, or in something else.

My little box was very simply constructed from seasoned wood, with a hole of regulation size in the regulation spot, and everything else made and placed according to "Hoyle." The box was attached to a tree-trunk, about ten feet from the ground, and was in place some time before the Wrens arrived from the South.

Since my childhood, not a few years ago, I have lived in the same place, in a suburb of Pittsburgh; and I can not remember a season when a pair of Wrens did not nest in an old orchard close by our house. To show, by way of a slight digression, how every opinion depends upon the point of view, I will say that this orchard was never pruned, and, as a consequence, was doubtless regarded by Wrens as the best orchard in the neighborhood; although, for the very same reason, a good horticulturist would have doubtless pronounced it the poorest orchard for miles around. Every spring, the rollicking and bubbling song of the male Wren could be heard all day long, day in and day out, through sunshine and through rain, as only that little king of optimists can sing.

Accordingly, I did not consider myself unreasonable to expect, especially since this best and poorest of orchards had just been felled by the hand of advancing civilization, that my box would be occupied. It wasn't. However, late in the nesting-season of that year, a male Wren visited the box daily for a time, and even carried in straws and sticks. I couldn't understand why, for he apparently had no mate; at least she never came near the box.

The following year I erected a second box on another tree, in a different part of the yard, but with no better success. Wrens were evidently nesting in our neighbor's place, about one hundred yards distant, for each year I could hear a male singing there from the latter part of April until nearly August. For the succeeding three years, I had the same experience, and, although I finally had various sizes of boxes and hollowed cocoanut shells all over the yard, I couldn't induce a pair of Wrens to raise a brood. I did, however, succeed in keeping a



SETTING THE CAMERA

male Wren constantly singing about the place for several weeks each season, which was well worth all my efforts. Finally, in July, 1907, the male Wren, which, as in former years, had been playing at housekeeping all by himself, was joined by a female. Though late in the nesting season, my hopes rose, and then rose higher still when the pair began to carry sticks and straws into the box. This was kept up for a few days, when both birds left the premises and were not seen again that season.

My curious experience interested me, and I determined to keep careful notes

of my ill-success and write up my failure for the readers of BIRD-LORE, who are accustomed only to accounts of success in similar efforts to attract birds. But all these intentions and plans of mine were spoiled on May 10, 1908, when one of my old boxes actually contained five young Wrens. I did not, however, greatly pride myself on this success, or rather failure, because the nesting-site in our neighbor's yard across the street had given way to a new dwelling since the preceding summer.

Of course, I kept careful and detailed notes of everything that transpired during the rearing of this brood; yet, I will here purposely omit all the customary details regarding feeding, etc., as similar information has so often been written



THE RETURN FROM THE HUNT

before about the House Wrens. The information that follows was new to me, and I give it because part of it may prove to be both new and of interest.

In the first place, I was interested in noting the selection of the nesting-box by the Wrens. All my cocoanut shells, which were securely suspended by heavy wires from the limbs of trees, so as to be cat-proof, were not fancied, and a small-sized, old wooden box, on the top of an eight-foot trellis, was chosen.

The feeding of my young Wrens was done entirely by the female, who drove the unwilling male from the nesting-site the second or third day after the young were hatched. Several times during the first two days following incubation, the male appeared at the box with food for his offspring. However, these efforts were not acceptable to her ladyship, who severely scolded her consort each time he thus appeared. For a day or two after this, the banished male could be heard



"DON'T BE LONG!"

singing from a distant tree, and then he disappeared entirely from the premises until the young were ready to leave their box, some two weeks later. Two days before the departure of the young from the box, the father returned, and was seen to carry a horse-hair into the box, though the latter was filled to overflowing with five fully fledged young. The day after the young left the nest, the male, singing constantly, remained about the box all day, and spent some time tearing down the old nest and flinging horse-hair, fine stripped bark and small twigs to the ground. These actions indicated that the male, who took no more part in caring for the young after they left the nest than he had done before, possessed the nest-building instinct at an ineffectual time, and when it was absent in the female. Now, if these facts can be taken as a criterion for the actions of other individual House Wrens, they may readily explain the presence in former years,, of nest-building single males, which had been similarly banished by females with broods elsewhere in the neighborhood. On the other hand, the single males mentioned may have been simply bachelors disappointed in love. May there not also be a possible connection between this curiously persistent nest-building instinct of the male House Wren and the instinct which impels his first cousin, the Long-billed Marsh Wren, to construct several complete nests, though occupying but one?

The return of the nest-building impulse to the female Wren, preparatory to her raising a second brood, also interested me. At first the expression of this instinct was confined to late evening twilight, after the female had finished her day's toil in feeding the young. I first observed this love-making the second evening after the young left the box. I again observed it on the fifth evening. The corresponding early morning hours may also have been employed in love-making, but I was not then on watch. During much of the time throughout the eighth day, the parents were together, and on the ninth day the female had entirely abandoned the young, and thereafter devoted all her time to the raising of her second brood.

In the feeding of the young, I was puzzled for some time to name a shiny, blue, berry-like object, which was occasionally administered. These objects proved to be blue-bottle flies, stripped of their legs and wings. However, these flies were more often given intact.

Another incident in the feeding of the young apparently demonstrated that a Wren, like many human mothers, may make a mistake in the selection of food. I one day noticed a young Wren disgorge food from the box hole. An examination of the substance disclosed an old dried-up snail shell, about one-half inch in diameter and too large to serve for even grinding purposes.

In the disposition of the young's excrement, which my records show to have been about one-third of the number of feedings, the excrement was always carried up into a neighboring tree, and, whenever I could see its final disposition, was laid on a limb, and not dropped to the ground.

I was greatly interested in comparing the length of time between the hatching

of the young Wrens and their departure from the nest with the similar time required in the rearing of a brood of Hermit Thrushes, studied by me the preceding year in northern Michigan. As the Hermit Thrush is strictly a ground-nesting bird, the dangers to its young must be far greater than the dangers met by immature House Wrens, which are raised under cover and off the ground. Consequently, it is not surprising that nature should have had the young Thrushes ready to leave their nest ten days after hatching, and should have kept the young Wrens in their box for sixteen days. The difference in the relative development of the two broods, upon deserting their nests, was very marked. The young Hermits could scarcely fly at all, and depended upon the thick underbrush for protection; whereas, all the young Wrens, except one weakling, could fly a num-



THE WORLD BEFORE HIM

ber of yards from the first, while, on the day after their departure, they apparently could fly at will, and in general appearance and actions differed but little from their parents. Thus, these Wrens were much better equipped than the Thrushes for the struggle for existence.

Throughout the nesting period, and for several days thereafter, I carefully watched the relation between the Wren family and the multitudinous English Sparrows that were ever present. The Sparrows bothered the parent Wrens by constantly dogging their every footstep, or perhaps I should say wing-beat. Upon one occasion, a Sparrow grabbed the female Wren by the tail, just as the Wren darted into her box, with its sparrow-proof hole. Although I have an intense hatred for the English Sparrow, yet I must give the devil his due, and say that I never saw a Sparrow offer to injure a young Wren. The former followed

the latter about out of an apparently never-satisfied curiosity. I even saw one inexperienced little Wren, at the end of a short flight, try to alight on the back of a Sparrow, which simply hopped to one side. From my observations of the attitude of Sparrows toward immature song birds of the various species about our neighborhood, it seems to me to be Sparrow etiquette not to attack young birds of any kind.

HAWK'S CHALLENGE

Winter or Summer, what care I?—

The tilled or the untilled plain?

My lot is cast in the blue abyss,

And the lordly sun's domain.

Over the broad champaign I float,

And over the sparkling sea;

I mount at will to the peak of heaven,

And rejoice that I am free.

Ko, keeo, kilio, keeo!

I exult that I am free!

Like a bolt I plunge to the land outspread,

From the desert realm of air,

To dip my beak in the hot, red blood

Of my little earth-brother there;

I pounce, I seize, and I tear,—why not?

For the law is aye the same;

And storm and battle, pillage and wrack

Are all a part of the game.

Ko, keeo, kilio, keeo!

They are all a part of the game.

Ko, kileo, ye groundlings born,

Of the tribes that reap and sow,—

Blessing and ban to me are one,

As up and aloft I go!

There are quaking hearts below, I ween,

For this black shape in the sky;

For the Hawk's breed has a Hawk's blood,

And a Hawk of the Hawks am I.

Ko, keeo, kileo, keeo!

A Hawk of the Hawks am I!

—Dora Read Goodale

Hawks Hunting

By WILLIAM COGSWELL CLARKE, New York City

MANY years ago, I happened to see a Hawk catch an English Sparrow. The driven Sparrow dashed into a wire fence a few feet from where I stood, and the Hawk simply picked the bird off the netting. The business-like manner of the Hawk and the helplessness of the Sparrow, as if the occurrence were predestined, made a vivid impression on my mind. Though I have seen many parts of such a tragedy since, I have not seen the whole repeated until last summer, when I twice witnessed how birds of certain families are captured by Hawks.

Late in August, a male Marsh Hawk, apparently hunting as usual for mice, flapped slowly over the meadows of the Housatonic valley, in northern Connecticut. As he passed me, I casually noted his snow-white rump, definitely confirming his identity. As the big bird wheeled, thirty feet in the air, across a field of fresh rye stubble, several little Chipping Sparrows scattered in haste from beneath him. I saw the Hawk mount a little and stop, then deliberately drop for a moment into the stubble. When he passed us, neither my companion nor myself could see that he carried anything in his talons. We both thought he had missed what he had tried for. We were surprised, therefore, to see him alight in the field a short distance away, and tear at something he held in his claws. I ran over to the spot as soon as he flew away, which was within two minutes after he lit, and found two or three wing and a few breast feathers, all that remained of a Chipping Sparrow, which, not over four minutes before, had been eating weed seeds with its summer companions. The Hawk was still in sight, flapping over the fields, his appetite apparently unsatisfied. When I came back to my companion, the Sparrows that had been frightened away had returned, and were again eating weed seeds, as if the whole thing were a matter of course.

In early September, I stood on a roadside in Sandwich, New Hampshire, when suddenly a Cooper's Hawk, flying with great speed, darted obliquely in my direction. Just as it reached me, it dived into the further side of a clump of alder bushes and hurled itself through the dense mass of branches. I saw then for the first time a Song Sparrow which, followed by the Hawk, flew out of the bushes; both dropped into the grass beside me. The Hawk, a never-to-be-forgotten picture, with its big tail marked with black bars, stood sidewise, anxiously looking for the Sparrow, when it saw me. I sprang forward to save the Sparrow, and the Hawk took a hurried departure. The Sparrow was wedged in the grass, with one wing outstretched, and her head tucked out of sight in an attempt to hide. I picked up the Sparrow, which was entirely passive and unresisting. For several minutes it gasped for breath, while I held it in my hand with no restraint, but, finally, realizing that its turn had not yet come, it struggled to be free, and, when released, flew off with great speed. If I had not been at hand,

presumably, the Hawk would have looked around at its leisure, and picked up the Sparrow as simply as I did.

Hawks, if they can get within a certain distance of their victims without being seen, can catch those birds that live near the ground and are not naturally endowed with great powers of flight. These birds either sit still, paralyzed with fear, or are driven so hard by the Hawk that they soon try to hide, and thus fall easy victims.

I have seen a Barn Swallow chase and tease a Cooper's Hawk. Both birds acted as if there were a mutual understanding. The Swallow knew that it was a better flier and better dodger than the Hawk, and the latter "acknowledged the corn." On the other hand, it is well known that the Peregrine Falcon, or Duck Hawk, can overtake and catch a Mallard Duck in open flight—a bird of great speed, but with practically no dodging ability.

In the case of the Cooper's Hawk, the Sparrow, with wing outstretched and head in the grass, helplessly attempted to hide. When the Marsh Hawk caught the Chippie, the Hawk must have been seen by the Chippie's companions, because they flew away. It would seem, therefore, that the bird which was caught either did not see the Hawk until picked up, or else crouched down when the Hawk appeared and awaited its fate.

Two Warbler Photographs

By ALBERT MORGAN, W. Hartford, Conn.

With photographs by the author

IN a locality near the Rhode Island coast, where the cedars were beautiful with pendent *Usnea* moss, it was my great pleasure to make the acquaintance of a Warbler, in its haunts, which, until June, 1908, was only familiar to me as a migrant.

The Parula Warbler, with his busy song of wheezy quality, was in evidence everywhere, scouring the blackberry and huckleberry bushes in search of larvæ. The male bird hunted for the patient female sitting upon the eggs or brooding the very young, or both male and female went in quest of food for the hungry family with ever-opening mouths.

Only those who more fully appreciate the bright flitting gems of nature know with what a thrill of genuine pleasure a new nest is added to the list of those already found. Two years before, in August, an old deserted nest was noted, and a great desire to visit the locality in the nesting season came over me, and my hope was realized in the year 1908.

We were enjoying the exhilarations of camp-life, and occasionally a Parula would alight upon the tent rope, where we had the best view of it. The accompanying picture but poorly depicts the picturesqueness of the nesting-site pointed out to me by the property-owner, who was a retired business man, and alive to

the wealth of nature's realm as revealed in his holdings of hill, vale, brooks, springs, thickets, rocks and cedars.

To get nearer my subject, a more ideal opportunity to make photographs of a Parula's nest and occupants never presented itself, perhaps, to any one. The beard of moss was most luxuriant, and afforded a quantity of material which needed but few additions when the nest was shaped. A nest containing seven eggs is, I presume, a rarity, and I could hardly believe I had found one until the moss was lightly pressed aside and the little speckled objects counted. The next day they were hatched, or at least some of them. Fear that I would disturb



PARULA WARBLER APPROACHING ITS NEST

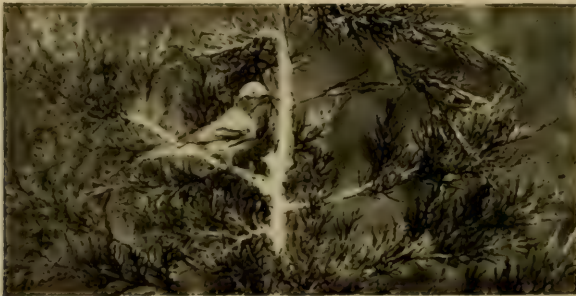
the tranquillity of the home made me timid about being too exact or scientific at this time. However, the next day, there appeared hungry mouths to feed, and the parent birds were now going and coming every three to five minutes in the morning. Photographs were made from a blind of three small cedars, fastened at the top and spread, tepee fashion, within four feet of the nest. Although showing signs of fear, at times, the parent birds went to the nest without much hesitancy. First a sharp chip was heard, then the bird appeared upon the stone wall in rear of the site, occasionally withdrawing to look at the blind, and at me with my slouch hat, only partially concealed behind the cedars. Plates developed every night gave room for improvement, and a last trial was to be made the day before the camp was left, but my disappointment was great when the nest

was found deserted. Although a severe thunder- and rain-storm was responsible for the destruction of another nest under observation, the complete disappearance of all the young from the nest shown in the photograph points to theft. Perhaps the red squirrel observed high up in one of the big cedars (over four feet in circumference) was watching me, and later yielded to the desire to destroy.

Not far from the home of the Parula, upon a hillside dotted with small cedars, a nest of Black-throated Green Warblers was found one and one-half feet from the ground, in a small cedar. After waiting about half an hour in the hot sun for the parent birds to alight near the nest, it was decided that it was useless to stay longer, for the old birds were reluctant to approach. If the family of the Black-throats had been younger, the parents would doubtless have shown more bravery. As it was, the young were about ready to leave, and, being slightly disturbed, they tumbled out of the nest, and this was the signal for the mother bird to flutter close to me and drop upon the ground, feigning injury to wings or leg, at the same time spreading the tail feathers wide, showing the outer white ones. It was then that I noticed she invariably lighted upon a small cedar opposite, and within seven feet of the nesting-site. This gave me an opportunity to focus upon her, with the light from a more favorable direction.

While the commotion in the Black-throat family was at its height, a splendid chance was afforded me of witnessing what appeared to be a flirtation between two Towhees; and, during the maneuvers, the beauty of the birds was strikingly displayed and the flashes of black, white and brown seemed brilliant as they fluttered upon a large gray mossy green rock, and then disappeared again in the tangle of briers.

A Prairie Warbler was also attracted by the clatter of voices, and, after adding a few of his alarm notes, soared high in the air, and came down in a series of tumbling flights into a bull-brier thicket over the brow of the hill. In the meantime, I was able to make three pictures of the Black-throated Green Warbler, one of which is presented here.



BLACK-THROATED GREEN WARBLER

The Hanging Home in the Oak Tree

By HARRIET WILLIAMS MYERS. Los Angeles, Cal.

With a photograph by the author



BUSH-TITS' NEST

ON the morning of February 19, 1908, I heard the sharp call of the California Bush-tit in my yard, and, hurrying to the door, was in time to see one of these tiny birds flying from a tree, his mouth full of cottony-looking material. It was as I had supposed,—housekeeping time had begun for the Tit family, as it already had for many another of the feathered tribe.

In the same block with my home grew a magnificent live-oak tree. Hither the little Bush-tit bore his cottony mouthful, and hither, also, I went, anxious to see just where in the big tree the long pendent nest which these midgets build was being hung.

I found the birds, for there were two of them in the tree, carrying lining material into a nest which seemed almost completed. It swung—some ten inches long—on a branch about fifteen feet from the ground, that hung almost over the sidewalk, where any one so desiring might easily see it. And yet, I doubt if any one, save those I told about it, ever saw the nest; so well did it blend with the gray bark of the twigs to which it was fastened.

Only the year before, I had watched the raising of a brood of Tits in this same tree; and I felt sure, as I watched this nest, that it was the selfsame one of the year before, and that the birds were only re-lining it. Such a stupendous task as it proved to be, and how the little midgets did work!

The birds themselves are about four inches long, having chubby gray-brown bodies, with long tails of the same hue, and being so much alike that it is almost impossible to tell them apart.

The morning on which I first found the birds at work I was unable to stay long at the tree; but two days later, in three-quarters of an hour spent at the nest, they made twenty-six trips to it, the shortest interval being one-half minute; the longest, six minutes. Both of them worked. Just which did the most it was hard to say; often one followed immediately after the other, thus enabling me to come to the conclusion that the work was very equally divided.

I imagined that I could tell the male and the female apart by their actions. These small birds usually utter their call-notes—a bell-like tinkle—as they forage, and this was kept up in their building. Their coming and going was always heralded by it. It seemed to me that, though their note was the same, there was a difference in the intensity of the two calls. One bird came with a noisy bustle into the tree, proclaiming his presence in no uncertain way. Such an important little busybody as he was! He was bringing building material for his nest, and he wanted everybody to know it. I use the masculine gender in describing this bird, because, the year before, when I had watched them nesting, I had found that the noisy one was the male,—the female slipping quietly out from the nest, and as quietly going to it. Of these builders, one little Tit was much more quiet than the other, and this bird I took to be the female.

The material brought was sometimes so small that it was hard to tell just what it might be. At other times their mouths were crammed full of cotton, and cottony-looking material. I have seen them pull at an old rope, raveling out the material in little tufts, which they carried away. I have heard, too, of their pulling the wool off a Navajo blanket that was being aired on the clothes-line. The outside of the nest was made of fine material felted together, bits of paper, strings, cloth, fine grasses, and oak tassels being woven into the outside. Sometimes, when the noisy bird came, he seemed to have nothing in his mouth; but, going to the opening of the nest, which was a small, round hole near the top, he would pull off some of the outside material and place it inside, and then fly away, giving his jovial '*tsip, tsip*.'

For more than a month I watched these little birds putting the finishing touches into their home. I wondered if nest-building was like house-building,—the outside of the structure going up with a rush, and, when looking completed, being only well begun.

On Saturday afternoon, March 21, at 2.30 o'clock, I found both birds busy in the tree. In five minutes, one bird, presumably the female, went into the nest and stayed, while the other foraged noisily for a short time, then flew away. Seven minutes later the male returned, and the female joined him. Three minutes later one bird went in with cottony-looking material, coming right out again. This building after brooding has begun is a habit of these tiny birds. Eleven minutes after the female left the nest, she returned, and nine minutes later, when I left, was still there.

In watching the nest the year before, I found that that female—as this one—came out and joined her mate, foraging for herself rather than being fed by him, as I have read is sometimes the case with these birds. Never did I see the male go into the nest after brooding had begun, unless, perchance, it were he who carried in the building material. The nearest approach to his doing so was a rather amusing attempt, one evening. At 5.15 I was at the tree. All was quiet at the nest, but one Tit was about in the tree. At 5.45 a bird came noisily to the nest, going to the opening, then flying away. Soon he came back and started

to go into the nest, but hastily backed out, and into the tree. At 6.03 he again went to the nest and was very noisy and insistent. I hardly knew what to make of his actions, but when, in two minutes more, the female popped out of the nest, I knew that all this noise and fuss was being made by the little male in an effort to get his little spouse to join him in the tree. For ten minutes Madam was away, then she returned to her duties, and I do not believe that even an irate mate could get her off those eggs again that night.

When two weeks of this brooding by the female had elapsed, I went to the nest, expecting to see both birds busy feeding. From my observations the year before, I knew that no time was spent in loafing about after the nestlings were hatched. I have one feeding record of thirty-five times in one hour; another time the two birds fed forty-seven times in sixty minutes,—the shortest interval being one-half minute; the longest, five and one-half minutes.

You can, perhaps, imagine my surprise when I found that the Tits were taking more building material into the nest, instead of food. What could it mean? This was April 5. Two days later the pair were still carrying in building material, making it evident to the observer, as plainly as if they had been able to tell it, that there were no young in the nest.

On the morning of the ninth, word came to me that the magnificent oak where the nest hung was to be trimmed up, necessitating the cutting off of the branch bearing the nest. I had worked hard to prevent the entire tree being cut down to make room for a cottage, and, though I had succeeded in saving the tree, the protest against trimming all the grace and beauty out of it had been of no avail,—and so the nest had to come down. For a day I left it hanging in my yard, hoping that the birds might come over, as they had been doing almost daily, and so resume family affairs; but, when they did not, I took it down and opened it for investigation. I found two small pinkish eggs, that were laid about three inches below the opening. It was evident that they were newly laid. Probably, had the nest been unmolested, more would have been added, since these birds lay as many as nine eggs in one brood. I had felt, when I found the birds carrying material into the nest instead of food, that probably, the eggs not hatching, they had covered them over and gone to laying more. By searching among the feathers, some two inches farther down, I found that my surmise was right. There, so completely hidden, that for some time I failed to find them, lay two more eggs, these two lacking the pink tint of the unbrooded eggs. I also found that I was right as to this being a last year's nest. Still down below the old eggs, nearly at the bottom of the nest, there was a layer of material having particles of an old egg and shells, plainly showing that a brood had been hatched there.

Originally, it had been some seven or eight inches from the opening to the bottom of the nest, but the filling-in process had brought the last eggs nearly up to the opening.

It was marvelous, the number and size of feathers that went into the inside of that nest. Count them I could not without destroying the nest, but I verily

believe that there were hundreds of them, varying from one-fourth of an inch to four inches, or as long as the little builders themselves.

Though my study of this family came to an unhappy ending, later in the year I had in my yard a large flock of these birds, at least ten of which were nestlings. It was amusing to see the chubby little fellows sitting in rows on a twig, hugging close together, as if they feared they might lose each other.

There were at least three old birds feeding this large family, and I did not know just what to make of it. Were there two families joined forces? If not, why three old birds feeding? Alas, there are many unsolved questions awaiting the student who would delve into bird-lore.

For three days they were about in my yard, still being fed, and then I lost track of them. Bush-tits make almost daily visits to my yard the entire year round, but just which particular Bush-tits they are, and whether they are "mine", I, of course, have no way of telling.

Blue Jay Boarders

By PAULA J. RITTER

Illustrated by the author

THE following notes on the habits of Blue Jays are based on the study of birds that come to the feeding-shelves in the window of my home situated four miles from the Court House in the city of Chicago. If a Blue Jay accidentally pushes a nut off the sill he will not hesitate to fly down on the floor, and seems to prefer the carpet to the bare wood when walking in the room.

I find that it is a bad policy to let Jays enter the house, however, for they are such fighters among themselves that if one should attempt to fly out of the room when another entered, there is always an encounter. In flying around a room the Jays always touch the ceiling when flapping their wings, and of course always select the highest perch.

I thought I understood a few of the Jay's notes, and had decided that "*te-ha-ha*" was a laugh, if a bird *could* laugh. It always came from the victor of a fight in the trees and always brought other birds to witness further fighting. One day, however, a Blue Jay went astray in my room and perched over my mantle on a fencing mask which was fastened to two crossed foils, and tied with class colors, and immediately gave his two college yells, the common "*Jay*" and what I had taken for a sarcastic laugh. He did not seem afraid but kept his perch for fully five minutes and kept up his noise. I always draw down the blinds and leave just a part of one window open to show the way out. This bird, however, kept up his yells. Other Jays came for nuts at the window-sill but paid no attention to him and finally he flew out.

One queer habit of the Jays is in returning food. Sometimes no bird has been at the window for ten or fifteen minutes, when one will come and return his two

peanuts and take his others instead, or else return a piece of soda cracker and take a peanut instead, or again, take a whole peanut and return a kernel, or perhaps just return a peanut and retain a kernel in his throat. They never bring anything other than that which they have taken, except a lot of sand. Their feet are very dirty and besides scratching a window-sill and leaving it covered with sand, they soon darken a piece of new wood when they perch on it.

In summer, Jays are reckless in getting nuts and do not mind my sitting at the end of the window, and people moving about the room, either loud talking or singing. I took the views I send about three feet from the window, and no pretence whatever was made at covering the camera or myself, or my hands. The birds do not object to my sitting at the window. Last summer and fall the Jays ate about three window-sills' full of peanuts each morning. That is, I had to put out three supplies before they were satisfied; but as the weather got cold



BLUE JAY GUESTS

either the number of birds or their appetites dropped off and they ate about a dozen English walnuts daily. Peanuts were then untouched, both the roasted and raw, shelled or whole.

Some of the Jays imagine they have more privileges than others and drive others away, and some, like human beings, allow themselves to be driven away. Their rule seems to be "one bird at a time." It is very seldom that two birds are on the sill at the same time unless they are young and being fed. Two birds at the same time almost invariably results in a fight. As soon as a bird leaves the sill, after he may have tried to make a combination of any two of the nuts, his place is instantly taken by another who swoops down and tries to make two of the nuts fit his throat, often turning the nuts over back end first, or combining other nuts, or returning some previously taken. I have often seen Jays make a bee-line for my window from a block away. They seldom eat at the window-sill. A Jay will generally eat his first portion in a neighboring elm, and after that wait until his mate has her two nuts, and then both fly away together carrying a nut apiece.

Notes from Field and Study

A Word for the Cowbird

Mr. Abbott's interesting article, "A Cowbird Nursery," suggests to me that there is occasion for a plea for this feathered Ishmaelite, against whom so many hands are turned.

It is not that Mr. Abbott is really so red-handed. He destroys Cowbird eggs without any qualms of conscience; and early in the morning he resolves to put an end to the little murderer and menace to the welfare of birddom. Then, with malice in his heart, he takes another picture of the voracious fledgeling, goes to breakfast, and—manages to let the young monster get away!

Mr. Abbott takes good pictures, but he would be a failure as exterminator of Cowbirds. *Molothrus* is wary, but he could hardly find safer place than the pastures above Rhinebeck.

It is a curious fact that, while some of the writers pass up the Cowbird with a lick and a promise, others have given much time and thought to this bird's habit of laying in the nests of other birds.

Cowbirds come high,—two larks for a bunting, as Mr. Burroughs puts it,—but for a long while I have had a suspicion that they are really worth the price. If the ability to get there under seemingly adverse conditions may be considered a point in his favor, then the little walker should be allowed to step right up and take his place among the really decent birds. And his day seems to be coming. In several of the states he is protected—by class, if not by name. In Missouri he has been an outlaw; but, as one of the respectable Blackbirds, his disabilities were removed by a law that went into effect August 16, and, from now, on the heavy hand of the Commonwealth will be laid upon the man who would do so much as crush the alien egg. This is, of course, at present mainly on economic grounds. May it not be that, along with the general uplift, people will come to

see that birds should be allowed to regulate their social and domestic affairs. Is it not just possible that the little Chestnut-sided Warbler did not make such a bad botch after all?

Not many summers ago, I came upon a young male Cowbird in a small bush by the roadside in a suburb of St. Louis. He had left the nest before he could fly,—a characteristic of this tribe,—and I remember well his bright eyes and the spirit with which he resisted against capture. It happened that he was brought up with few restrictions; and in a very short time he developed into a most interesting pet. As his wings grew, he was given on opportunity to try them in a small backyard. Sometimes he would make extended flights, circling high above the house-tops and amusing himself in many ways; but he seemed to consider it a trick of the game to return to the finger from which he had taken flight. I have had a number of birds, and have observed many others. I have read 'Bob,' the story of Sidney Lanier's pet Mockingbird. I know the pathetic story of the little Scraggles, but never have I seen a bird that was quite so companionable and happy as Chip. He had much curiosity, and a match was his undoing. A knoll in one of our city parks became his last resting-place.

There has been not a little discussion as to whether the Cowbirds ever depart from their parasitic habits. In at least one case, it has been reported that in confinement they built a nest and reared young. It is not a question of veracity, for bird-lovers, like fishermen, tell straight tales. But, were they Cow Buntings? Major Bendire, who made a most exhaustive study of this family, thinks they were probably Brewer's Blackbirds. For a long while, I have been on the lookout for a pair of the fledgelings, with a view to making some investigations along these lines. If Mr. Abbott is willing to run the risk of being won over, let him bring up a Cowbird as a pet. The Cow-

birds are all right.—R. J. O'NEAL, 314
Pine street, St. Louis.

City Bird-Life

For the encouragement of any one who is longing to become acquainted with our native birds, but feels greatly handicapped by residence in the city, I wish to give my experience.

During the winter months, I live in the heart of the great city of Brooklyn, N. Y., in a section called Stuyvesant Heights, which is entirely built up. At the corner is a large church, a few steps from which is the apartment house in which I live. The third floor on the east side of the building constitutes my home, and it is on a level with the roofs of two small frame buildings standing between the church and the apartment.

A small silver maple tree is growing by the side of the house, so close that some of the branches brush against the east window of the dining-room. At the rear of the house, the block is made up, for the most part, of small, detached houses, which date back to a time when this part of the city was suburbs,—consequently there are numerous large trees both in front of the houses and in the yards at the back.

When I first came here to live, which is about ten years ago, there was a large vine of Virginia creeper running over a portion of the church, and other surfaces were covered with Japanese ivy. Doubtless, the presence of the trees and the fruit of the vines made the locality attractive to birds, so that during my residence here I have seen from the windows or the house-top, or have heard the notes of the following species: Baltimore Oriole, Orchard Oriole, Towhee, Catbird, Cuckoo, Chickadee, Chimney Swift, Fox Sparrow, White-throated Sparrow, Chipping Sparrow, Golden-crowned Kinglet, Hermit Thrush, Wood Thrush, Brown Thrasher, Herring Gull, Hummingbird, Junco, Maryland Yellow-throat, Magnolia Warbler, Redstart, Canadian Warbler, Nighthawk, Oven-bird, Phoebe, Wood Pewee, Robin,

Rose-breasted Grosbeak, Red-eyed Vireo and Scarlet Tanager.

I have suspected the presence of several other species, but could not see the birds well enough to positively identify them, or could not with absolute certainty distinguish the song.

One mid-February morning I saw a "wedge" of birds proceeding northward, which I supposed were Wild Geese, and in a nearby street I once saw a Bluebird.

With the exception of the Gulls, all of the birds have been seen during either the spring or the fall period of migration. My first acquaintance with the Hermit Thrush and the Golden-crowned Kinglet was made from my windows here in the city. One time a Hermit Thrush calmly and deliberately took a bath in a pool of water left by recent rain on the roof of the adjoining house above referred to, and another time one rested for at least twenty minutes in the maple tree, not more than six feet from the window.

In this same maple tree I have had thrilling glimpses of Kinglets and Warblers that were almost within reach of the hand. It stirs one's blood strangely to hear such a song as that of the Wood Thrush (as I did last spring), where ordinarily nothing more musical is heard than the chirp of the English Sparrow, the buzz of the trolley car and the clang of its bell, the rumble and clatter of passing vehicles, the harsh shouts of the vender, or the persistent clamor of boys at play.—MARY F. DAY, 658 *Monroe street, Brooklyn, N. Y.*

Birds at Mount St. Gabriel, Peekskill, N. Y.

The locality surrounding Saint Gabriel's School, Peekskill, N. Y., is rich in bird life. Ninety different kinds of birds were identified during the year 1908, within a radius of a mile and a half from the school; and thirty-one of these are known to have nested here. Nests were found belonging to Baltimore Orioles (four), Redstarts (two), Wood Thrushes (three), Hummingbirds (three), Chipping Sparrows (four), Red-eyed Vireos (three), Robins (twelve),

Chickadees (two), Bluebirds (two); also one nest each of Orchard Orioles, Flickers, House Wrens (in a bird-box), Yellow-throated Vireos, Scarlet Tanagers, Catbirds and Wood Pewees. The following birds were also here all through the breeding season, although their nests were not actually found: Oven Birds (at least six pairs), Red-winged Blackbirds (a colony of them about a mile up the Peekskill creek), Brown Thrashers (one pair), Golden-winged Warblers (two pairs), Veery (one pair), Towhees (several pairs), Phœbes, a flock of Starlings, Song Sparrows (in numbers), Field Sparrows (in numbers), Crows, Goldfinches (in numbers), Swifts (a flock), Kingfishers (one or two pairs), and Ruffed Grouse (one pair).

The birds which come to our winter feeding stations are: Chickadees, Juncos, White-breasted Nuthatches, Downy Woodpeckers, Hairy Woodpeckers and Brown Creepers.

The following Warblers were noted during the spring migration, the dates given being those on which the birds were first seen: Pine Warbler (April 23), Oven Bird (April 26), Black and White Creeper (April 27), Redstart (April 28), Maryland Yellow-Throat (April 28), Worm-eating Warbler (April 29), Parula Warbler (May 2), Chestnut-sided Warbler (May 3), Myrtle Warbler (May 4 and probably earlier), Black-throated Blue Warbler (May 6), Blackburnian Warbler (May 4), Northern Water Thrush (May 4), Black-throated Green Warbler (May 5), Golden-winged Warbler (May 9), Hooded Warbler (May 9), Louisiana Water Thrush (May 10), Yellow Palm Warbler (May 10), Yellow Summer Warbler (May 10), Magnolia Warbler (May 15), Yellow-breasted Chat (May 16), Canadian Warbler (May 17), Black-poll Warbler (May 17), Bay-breasted Warbler (May 17),—in all, twenty-three kinds.

A pair of Northern Water Thrushes were seen daily during two weeks on the edge of a swampy pond, about five-minutes' walk from the house.

A flock of White-throated Sparrows and

a flock of Ruby-crowned Kinglets linger with us for several weeks every spring and autumn.

A flock of Hermit Thrushes passed through, April 13, and a flock of Cedar Waxwings, May 5.

A Green Heron was seen wading in a pond almost within sight of the house in August.

Whether from lack of observation, or because the return route is slightly different, we have seen far fewer Warblers in the autumn migrations than in the spring. Observations have been made for four or five years, but data were not recorded before last year.—SISTER SUPERIOR, *St. Gabriel's School*.

Save the Underbrush

The ravages of the gypsy moth have been so serious in eastern Massachusetts that not only all farmers, but many bird-lovers, have cut down all of the underbrush on their estates. They think it is desirable to shave the ground as smooth as the surface of a mill pond, and apparently consider it a crime to let two trees stand nearer than thirty feet apart. They have changed the beautiful woods into lawns, dotted with artificial bean-poles, stripped of all branches to a height of twenty feet above the ground, and left in rows just so far apart. These excited people forget that they are driving away the birds; forget that they are driving away the greatest enemies the injurious insects have. The few birds that are left live either in or near groves of fir trees, which have not been disfigured in the battle against the gypsy moths. I therefore urge all the readers of BIRD-LORE to save patches of underbrush here and there for the birds, and I recommend that a local ornithologist be consulted before any number of trees or much underbrush be destroyed. To illustrate my point: A gentleman who had a few acres of woodland cleared of underbrush and several trees happened to select a spot which was frequented by the only Woodcock that is known to nest within miles of here. Had this gentleman tele-

phoned to one of the Belmont ornithologists, he would have been requested to spare that particular patch. The evening flight song of the American Woodcock, which has delighted so many bird-lovers, will probably never again be heard in this town. Think, before you cut.—SAMUEL DOWSE ROBBINS, *Belmont, Mass.*

The English Sparrow and Bird-boxes

A trick of the English Sparrow to drive other birds from a bird-box, which is situated eighteen feet from one of our windows, has been frequently noticed. This box has been in position for five years, and has been occupied once by Bluebirds and once by Wrens. Both of these species every season show a desire to nest in it, but no sooner does their choice become manifest to the English Sparrow than he goes at once into the box and, hanging himself half-way out, he keeps up his ribald demonstrations until the would-be tenants leave the vicinity. The same course of proceedings on his part was observed last March, when a Downy Woodpecker was searching for food there, and possibly may have taken a peep into the box. This hostility on the part of the English Sparrow might be more easily overlooked if he had ever selected this box for a nesting-place. As he has never done so, this dog-in-the-manger attitude shows his evil disposition.

Various devices have been tried to keep these Sparrows from the other boxes, but none have been so effective as that of leaving them alone until the incubation of their eggs is under way, then the nest and eggs are cast out and the door of the boxes left open for a few days; after that Bluebirds and Wrens have been allowed to use them.

To the dog and the cat is often charged the spreading of the infectious germs of swine and poultry diseases. While these animals have one chance to be such bearers, the English Sparrow probably is guilty a hundred times, in his rôle of gleaner in the hog-pen and poultry-yard. One of our neighbors has been quite suc-

cessful, in winter, in killing these Sparrows that were roosting under a straw-covered shed. This was done by the fumes of burning sulphur, which caused the birds to drop unconscious, and they were drowned before they revived. Another person has killed them by catching them in a mouse-trap of the out-of-sight style. Another neighbor had for a year about his yard a Screech Owl that kept the Sparrows away, and made no disturbance aside from flying against windows on moonlight nights. Last winter "a fool with a gun" shot this Owl, and within a month the English Sparrows were flocking back to that place.—ALTHEA R. SHERMAN, *National, Iowa.*

Sheltering Wings

It was a very warm day in May, before the trees had put on leaves enough to produce any shade, and the young Robins in their nest in a woodbine, on my porch were exposed to the direct rays of the sun. The untimely heat became a burden, even to us, and the little birds soon began to suffer, as they showed by panting and open mouths, even drooping their heads over the side of the nest. The parents were evidently distressed by the little ones' condition, and flew about much excited, seemingly not knowing what to do; but it was as evident that they knew the cause of the suffering, and finally they literally threw themselves into the breach. For one of the birds took its place on the edge of the nest and stretched out its wings in such a way as to screen the young ones from the sun. When it became exhausted from holding its wings in this unnatural position, it left, and the other took its place. Thus taking turns, they sheltered the nest for several hours, while we watched this exhibition of parental love and endurance.—M. L. DAVIS, *Blue Point, L. I.*

[It is not unusual for birds to shelter their young with spread wings from the rain as well as from the sun. See, for example, Mr. Abbott's photograph of a Chestnut-sided Warbler in this position, in the last issue of BIRD-LORE.—ED.]

Book News and Reviews

DOROTHY BROOKE'S SCHOOL DAYS. By FRANCES CAMPBELL SPARHAWK. With illustrations by Frank T. Merrill. Thomas Y. Crowell & Co., New York. 1909. 8vo. 358 pages.

Dorothy Brooke is a type of a lovable school girl with a heart large enough to take in not only her schoolmates, but also the birds. Her championship of her bird friends is a fine example for every American school child. The story is one that should be in every school library. No mother need fear to place the book in her daughter's hands, who, if she adopts the motto of Dorothy Brooke, can not fail to become a good woman.

Books of this character are good reading for the young folks.—W. D.

THE BIRDS OF ILLINOIS AND WISCONSIN. By CHARLES B. CORY, Curator of Department of Zoölogy. Field Museum of Natural History. Publication 131. Zoölogical Series. Vol. IX. Chicago, U. S. A., 1909. 4 to 764 pages.

According to the preface, "the present work includes, as far as known, all species and subspecies of birds which occur in Illinois and Wisconsin, the total number being 398, with descriptions of their various plumages, nests and eggs, and geographical distribution, together with more or less brief biographical notes concerning them." The work is, therefore, a complete manual of the birds of the two states.

The illustrated keys are very comprehensive, occupying the first 274 pages. There is also a key to the eggs of the breeding species and a bibliography of eleven pages.

The occurrence of so large a number of birds, 400 species and sub-species, in these two states, is due to a combination of favorable circumstances. The proximity of the Great Lakes results in the presence of many aquatic species ordinarily absent from inland localities. The occurrence of many western species is another element. The five characteristic Mississippi valley species—Yellow-headed Black-bird

Western Meadowlark, Lark Sparrow, Clay-colored Sparrow and Bell's Vireo are more or less common breeding birds in at least parts of the area, and constitute the only important difference between the avifauna of these states and those of the Atlantic border. In addition to these, there are 35 or 40 distinctly western species that occur as stragglers. The 700 miles between the northern and southern boundaries of the region results in great differences between the bird faunas of the two extremes, and, while some boreal species have been recorded only from northern Wisconsin, a much larger number of typically southern species are known only from Illinois.

The numerous illustrations—the majority borrowed from various sources, but a few, apparently, made especially for the present work—are of very unequal merit. Many of the wood-cuts of heads are lacking both in character and in artistic quality, and are unworthy of a work of such value. The half-tones, while more satisfactory, are, in some cases, marred by slight inaccuracies. Thus, the tarsus of the Man-o'-War Bird is represented as wholly devoid of feathers, and the small hind-toe of the Avocet is remarkably elevated. An excellent feature is the representation on one plate of related species, such as the various Owls and the Woodpeckers, to show their relative size.

A few errors have inevitably crept in. The head of the Long-billed Marsh Wren does duty for Nelson's Sharp-tailed Sparrow, on page 197; the figure of the Cooper's Hawk on page 461, is actually the Broad-winged Hawk, and the latter species, following the error of the Check-List, is located in the sub-genus *Tachytriorchis*. A number of sub-genera are omitted, apparently unintentionally, as under *Marila*, *Sterna* and *Pelecanus*.

Only the typical sub-species of the Parula Warbler, *Compsothlypis Americana*, is given; but *usneæ* is the form found

in Wisconsin, and probably also in Illinois, although a specimen of *Americana* has been recorded from the southern part of the latter state.

These slips are mere details, however, and do not detract materially from the general excellence of the work, which has evidently been carefully done, and will be a very useful handbook to the students of Illinois and Wisconsin birds. —W. DEW. M.

The Ornithological Magazines

THE AUK.—‘The Auk’ for July opens with a suggestive paper by Spencer Trotter on ‘The Geological and Geographical Relations of the Land-Bird Fauna of Northeastern America.’ Charles W. Townsend presents an interesting synopsis of our knowledge concerning ‘The Use of the Wings and Feet by Diving Birds,’ and also a summary of recent occurrences of the Carolina Wren in New England, where this bird is becoming increasingly common. Charles W. Richmond completes his ‘Reprint of the Ornithological Writings of C. S. Rafinesque,’ begun in the preceding issue, and of historical interest also is ‘Some Original Manuscript Relating to the History of Townsend’s Bunting,’ contributed by Ruthven Deane, to whom we are indebted for so many valuable papers of this character. A. H. Felger writes at some length of the water birds of portions of Weld, Morgan and Adams counties, Colorado; Walter P. Taylor records the capture, at Nicasio, California, of a Hummingbird of the *Selasphorus ‘floresii’* type, believed to be a hybrid between *S. allenii* and *Calypte anna*, and comments pertinently on the ‘Weight of Generic Characters in the Trochilidæ.’

The ‘Fifteenth Supplement to the American Ornithologists’ Union Check-List of North American Birds’ is the final report of the A. O. U. Committee before the publication of the revised edition of the Check-List, which will probably appear during the coming winter. Of special interest to readers of BIRD-

LORE will be the changes which have been made in the common names of our birds, and we therefore reprint that section of the report in full, as follows: “In addition to the list of changes given below, it was decided to omit ‘American’ as a part of a vernacular name, and to add ‘European’ where necessary. Also, to abandon the adjectival form of geographical names,”

LIST OF NAMES

OLD	NEW
St. Domingo Grebe	Mexican Grebe
Dark-bodied Shearwater	Sooty Shearwater
Stormy Petrel	Storm Petrel
Tropic Bird	Tropic-bird
Anhinga	Water-Turkey
Man-o’-War Bird	Man-o’-war-bird
Widgeon	European Widgeon
Steller’s Duck	Steller’s Eider
Lesser Snow Goose	Snow Goose
Ross’ Snow Goose	Ross’s Goose
White-bellied Brant	Brant
Whooping Swan	Whooper Swan
European Blue Heron	European Heron
Snowy Heron	Snowy Egret
Greater Snipe	Great Snipe
Bartramian Sandpiper	Upland Plover
Ring Plover	Ringed Plover
Little Ring Plover	Little Ringed Plover
Surf-Bird	Surf-bird
Partridge	Quail, in Nos. 292-296
Canada Grouse	Spruce Partridge
Prairie Hen	Prairie Chicken
Sage Grouse	Sage Hen
Florida Wild Turkey	Florida Turkey
Black Merlin	Black Pigeon Hawk
Richardson’s Merlin	Richardson’s Pigeon Hawk
Green-crested Flycatcher	Acadian Flycatcher
American Raven (No. 486)	Western Raven
Bicolored Blackbird	Bicolored Red-wing
Tricolored Blackbird	Tricolored Red-wing
House Finch	California Linnet
Leucosticte (Nos. 523-526)	Rosy Finch
Snowflake (Nos. 534-535)	Snow Bunting
Sandwich Sparrow	Aleutian Savannah Sparrow.
Savanna Sparrow*	Savannah Sparrow
Bryant’s Marsh Sparrow	Bryant’s Sparrow
Belding’s Marsh Sparrow	Belding’s Sparrow
Townsend’s Sparrow	Townsend’s Fox Sparrow, and the word ‘Fox’ is added in the names of all the sub-species of No. 585.
Louisiana Tanager	Western Tanager
Parkman’s Wren	Western House Wren
Turner’s Chickadee	Yukon Chickadee
Wilson’s Thrush	Veery.

“The word ‘Bewicks’ is to be omitted from all the sub-species under No. 719, except the first.

*Named from the city of Savannah.

"Ridgway's vernacular names, in 'Birds of North and Middle America,' are adapted for the species and sub-species of *Chamaea*. 'Macgillivay's Warbler' is *not* changed to 'Tolmie's Warbler.'"—F. M. C.

THE CONDOR.—Of the eight principal papers in the May number of 'The Condor,' three treat of nesting habits. Hanna reports the finding of a nest and eggs of the White-throated Swift, in May, 1908, in an old quarry on Slover mountain, near Colton, California; Silloway tells of finding the nests of the Long-billed Curlew and Short-eared Owl in Montana; and Rockwell describes 'The Use of Magpies' Nests by Other Birds.' The Long-eared Owl, Western Horned Owl, Screech Owl, Sharp-shinned Hawk, Dove and English Sparrow are mentioned as species known to utilize abandoned nests of the Magpie as nesting-sites. In a brief but interesting article, Gifford gives notes on two pairs of Mourning Doves which bred in captivity, and incidentally indicates that the period of incubation is fourteen days. The chief point of interest in Tyler's 'Notes from Fresno County,' is the record of the Spotted Owl (*Syrnium occidentale*), near Elovio, on March 9, 1908. In a short, illustrated article, Ray describes the 'Passing of the Pedro Island Seabird Rookery,' in San Mateo county, California, where eight species of birds still breed in greatly diminished numbers. An 'Ornithological Trip to Los Coronadas Islands, Mexico,' is described by Wright, who adds notes on twenty-two species of birds found on the islands in June, 1908.

Preston's brief article on 'The Swarming of the Ruby-crowned Kinglet,' and an editorial note on cats (here styled 'Cherisht Pets') have an 'unlookt for' interest 'attacht' to them by having their verbs 'clipt.' Heretofore the appearance of 'The Condor' has been marred by a few bob-tailed words, like 'altho,' 'thru' and 'thoroly.' Now the editor, in a frenzy of simplified spelling, has attacked about twenty verbs, chiefly those ending in

h, k, p, and s. The innovation might be less objectionable if it were accompanied by consistency, but it seems to have been applied only in spots. Judged by the standard of the pages above mentioned, another page contains at least half a dozen typographical errors. A more serious difficulty is the mutilation of names of certain species, which will probably soon follow. The use of the forms '*hatcht*,' '*lockt*,' '*hopt*,' etc., necessarily means the adoption of such names as '*Scorcht* Horned Lark,' '*Russet-backt* Thrush,' '*Black-capt* Vireo' and '*Sharp-shint* Hawk.' In fact, the '*Olive-backt* Thrush' is formally introduced in abbreviated form in this number.—T. S. P.

THE WILSON BULLETIN.—The June, 1908, number of this long-established publication opens with an illustrated paper on 'June Birds of the Washington Coast,' by Lynd Jones. F. L. Burns contributes the second of his Alexander Wilson series, 'The Mystery of the Small-headed Flycatcher,' and there is a large instalment of Taverner and Swales' valuable paper on 'The Birds of Pt. Pelee.' In the September issue this paper is completed, and Burns contributes another paper on Wilson, while there are various local notes.

For December, we have 'The Making of the American Ornithology,' from F. L. Burns. Adrian Larson gives a list of October birds of Wall Lake, S. D.; P. A. Taverner contributes his 1908 bird notes in southeastern Michigan, and Lynd Jones presents another instalment of 'The June Birds of Washington.' Dr. Shufeldt has a note on the nest of the Mississippi Kite, and the usual Ohio notes complete the issue.

The March, 1909, number contains another Wilson article by Burns, and an instalment of Jones' 'June Birds of Washington.' B. H. B. also writes of the Barn Owl in Ohio, and there is an interesting series of observations by students of Ohio University who watched nests of young birds during an entire day, noting the number of visits made by the parents, etc.

For June, Lynd Jones contributes an extended paper on 'The Birds of Cedar Point, Ohio,' while an illustrated paper by the same author, in conjunction with W. F. Henninger, treats of the Falcons of North America. Dr. R. W. Shufeldt contributes 'Some Washington Bird Notes,' W. F. Henninger, 'Spring Migration in Middle Western Ohio,' and W. E. Saunders, 'Notes on the Rough-legged Hawk.' 'The Bulletin' also has in each number many valuable notes, chiefly relating to Ohio and Michigan.—W. S.

JOURNAL OF THE MAINE ORNITHOLOGICAL SOCIETY.—The June, 1908, number of this magazine contains a state map, reproduced from Knight's 'Birds of Maine,' with an explanatory paper on the faunal areas. W. H. Brownson contributes a detailed daily diary of the migration at Cape Elizabeth, Me., for May 13-27, which will prove interesting to observers elsewhere who wish to make comparisons. P. B. Rolfe writes of 'Fishhawks Forty Years Ago.' There is also an obituary of Prof. Leslie A. Lee, late president of the society.

For September, O. W. Knight writes on Sambo, a pet Long-eared Owl, and Sara C. Eastman contributes an account of a pet Blue Jay. Howard H. Cleaves has a tribute to the Spotted Sandpiper, as observed at Staten Island, N. Y.,—rather out of the range of the Maine Society,—and W. H. Brownson writes entertainingly of 'A Visit to Grand Manan.'

In the December number, Francis H. Allen has an interesting 'Ornithological Reconnaissance' of Monhegan Island; Dr. Wm. C. Kendall describes a 'Family of Loons' at Sebago Lake; and Mrs. E. H. Marks contributes a photograph of three Robins' nests built close together, on three successive years.

The March, 1909, number contains the proceedings of the thirteenth annual meeting of the society; also, 'The Carolina Wren in Maine,' by Mrs. E. E. Brewer, and numerous Christmas bird censuses.

In the June, 1909, issue, W. H. Rich

writes on the Hungarian Partridge and its introduction into Maine, Dr. W. C. Kendall contributes some 'Notes on Birds at Sea,' collected while serving on the Fish Commission schooner, 'Grampus,' in the north Atlantic. Mrs. D. F. Wentworth has an article on a 'Pet Cedar Waxwing,' and O. W. Knight describes the occurrence of Bohemian Waxwings in Maine during March, 1909. The usual numerous local notes and migration records form an important feature of all the issues, and attest to the continued activity of the Society.—W. S.

Book News

THE first Annual Report of E. H. Forbush, State Ornithologist of Massachusetts, is issued as a six-page reprint from the Fifty-sixth Annual Report of the Massachusetts State Board of Agriculture, and is an admirable exposition of the ways and means by which a professional ornithologist may be of value to the State.

WE learn from the July 'Ibis' that at the annual meeting of the British Ornithologists' Union the following resolution was passed: "If, in the opinion of the Committee, any Member . . . of the Union, shall have personally assisted in or connived at the capture or destruction of any bird, nest, or eggs in the British Isles, by purchase or otherwise, likely, in the opinion of the Committee, to lead to the extermination or serious diminution of that species as a British bird, the Secretary shall be directed to send a registered letter to that Member, stating the facts brought before the Committee and asking for an explanation of the same, but without mentioning the source from which such information was obtained. After allowing a reasonable time (not less than a clear fortnight after the receipt of the Secretary's letter) for reply or for appearing in person before the Committee if he so desire, the Committee, providing not less than four are agreed, shall have power to remove that gentleman's name from the List of Members without assigning any reason."

Bird - Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUKUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

HAVING now figured in color the Warblers, Thrushes, Flycatchers and Vireos of North America, we shall present in the next issue of BIRD-LORE the first plate of the much-requested series illustrating the Sparrows. The drawings, by Fuertes, will be reproduced by the most adequate process.

BIRD students should be grateful to the American Ornithologists' Union's Committee on Classification and Nomenclature for the comparatively few changes it proposes to make in the common names of our birds in the forthcoming revised edition of the 'Check-List' of North American birds. Where scientific names are concerned, the committee has no choice but to apply the accepted rules of zoological nomenclature; but vernacular names know no law, and the committee here was governed only by its own judgment. As will be seen by the list, printed in our notice of the July 'Auk,' in which the committee's report appears, aside from minor alterations affecting, for example, compound names which are capitalized and hyphenated to conform to current custom, most of the changes are distinct concessions to popular usage, such book names as 'Bartramian Sandpiper,' 'Leucosticte,' 'Wilson's Thrush,' etc., giving away respectively, to Upland Plover, Rosy Finch and Veery.

The committee's decision to omit the word 'American,' and add 'European,' where necessary, tends toward brevity,

without loss of clearness. When we speak of Robin or Crow, for instance, our native species are, of course, as much understood as the use of the same names in England implies that the European species are referred to. On the other hand, it is clearly as proper for us to use the word 'European' as it would be for the Englishman to employ 'American' under similar circumstances.

It is curious to what lengths the specialist will go in the effort to show that his particular branch of science is the only one through which we may hope to reach the end in view. Here we have an animal psychologist, who, writing in McClure's magazine for August, assures us that the day of the study of animal life in nature is past. It is true, he is good enough to acknowledge that the "naturalist of the older sort did indeed secure much valuable information,—but it took him a lifetime to do it. He went out into fields or woods for the chance of running across some interesting creature; and, even when luck favored him most, he had to wait patiently hour after hour for the chance of seeing something new or significant."

Our writer, and his kind, however, have changed all that. They will waste no time in learning the relations of an animal to its natural surroundings and its actions in them; on the contrary, to quote again, "he brings the animal into his laboratory, and arranges matters to suit his convenience, not its." Here, no doubt, he will ascertain certain facts which the field observer would never ascertain, but to assert, for this reason, that the latter's days "are past," is an example of that narrowness of vision of which scientists are unfortunately too often justly accused. We commend to the writer of the article in question Doctor Watson's 'Studies of Terns in the Tortugas,' as a contribution to our knowledge of animal behavior by a psychologist, who, although an acknowledged leader in laboratory research, is still far too good a naturalist to be blind to the importance of studying an animal in its own environment.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by MABEL OSGOOD WRIGHT

Address all communications to the Editor of the School Department, National Association of Audubon Societies, 141 Broadway, New York City

How One School Made Bird Houses

By JOHN D. HANEY, P.S. 5 Bronx, New York City

UNDER the stimulus of suggestion from principal and teacher, the boys of Public School 5, Bronx, New York City, became, last term, very enthusiastic over the idea of making bird-boxes or bird-houses. They realized at once the very real character of the exercise, and the chance of putting their handiwork actually to use in their own backyards and open spaces around their houses, for the Bronx is still a part of the city that boasts of open lots and haunts of Wren and Blue Jay.

For those that wanted to make illustrations instead of houses, or for those that wanted to make both, the teacher projected the making of posters, to announce the special exercises that the school would hold on Audubon's birthday as a bird day; and these, along with the houses themselves, became part of the exhibit for Audubon Day.

The houses were made by the pupils when out of school, and from material that they supplied themselves. The school, not having a shop or adequate appliances for the work, and having no lumber for the construction, could give the boys little in way of encouragement, except the spirit of the aim and the desire to "make something." But this was sufficient. The teacher secured the pamphlets from the Audubon Society, and copies of BIRD-LORE, that gave ideas in regard to the building of houses, and the pictures of the birds with the circulars telling of their habitat and customs. The boys made a study of these data, and tried to determine for themselves what kind of house would do for what kind of bird. They were not always successful in this, because the real bird was not present to be investigated; but with the stuffed and mounted specimens from the Museum of Natural History, and with whatever information could be gleaned from such books as those of Olive Thorne Miller, Chapman, Beebe, Wright, etc., they made a start.

They were compelled by the conditions of the competition, which was open to all of the higher grades, to make working drawings of what they intended to construct before they went about their other task. This was done partly so that the work might count as an exercise with a real aim in working drawing (too often an uninteresting drawing), and as an assurance that there would be no getting of a house that would be a palpable misfit for the occupant in whose interests it was being made.

The boys proved to be tremendously engrossed with their work, and made their houses eagerly, and sometimes over more than once, in order to get a result that satisfied them. They sought, and secured with reasonable success, the rustic appearance, and they wrought out of unpromising material, such as old soap-boxes, miles too large, neat and satisfying effects.

They kept in mind that a good bird-house does not necessarily look like a house for human habitation, and that sometimes the less like a real "house" the bird-house looks, the better bird-house it may be. They inclined the roof to keep the rain from soaking through, they studied the location of the perch, and they considered the problem of the pestiferous cat and the English Sparrow. They pored over the problem of the size of the hole for an entrance, and they devised clever doors for the cleaning of the house, after the tenants had left it.

Public School 5 is a small school, as schools go in the great city of New York, so that not more than five classes of about forty each were involved in the making of the posters and houses. The work was wholly voluntary, and was done mainly after school and at home. It served to arouse an interest in the conservation of our native birds, and to lead in some small way, at least, to the observation of bird ways and the function of the bird in the life of the community.



BIRD-HOUSES AND POSTERS FOR AUDUBON DAY EXHIBITION. P. S. NO. 5,
BRONX, NEW YORK CITY
Photographed by George Gade



BUSH-TIT

Order—PASSERES

Genus—PSALTRIPARUS

Family—PARIDÆ

Species—MINIMUS

The Bush-Tit

By WILLIAM L. FINLEY

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 40

The Bush-tit's home is on the Pacific coast. He is so much of a Westerner that he is entirely unknown in the eastern states. He may be recognized by his diminutive size, as he is but little larger than a Hummingbird, but more fluffy in appearance and with a tail that is as long as his body. He is dressed modestly in grays and browns, with not a touch of bright coloring. As a nest-builder, he has no equal among our small birds, for he builds a long gourd-

shaped home from eight to ten inches in length, with a side entrance at the upper end. As a bird character, he is fearless and readily accepts human friendship.

One can hardly help falling in love with a Bush-tit. He is such a tiny mite, not larger than your

Character thumb. He goes along in such a bustling, business-

like way. He is absolutely fearless, at times. One can make friends with the Bush-tit as easily as with his cousin, the Chickadee. Any one who has studied bird character would know that these two birds are related, even if he did not know that both are members of the family, *Paridae*. I do not know why the

BUSH-TIT WITH FOOD FOR YOUNG
Photographed by H. T. Bohlman

Bush-tits and Chickadees place so much confidence in mankind. Perhaps they remember only the kindnesses of our race, and not the evils. But, even though these two birds are so alike in character, they are so different as home-builders. One might wonder how the Bush-tit has developed such remarkable ability as a home-builder, when the Chickadee is content to dig himself a den in the heart of some old stump.

The Bush-tit never seems to be moody; perhaps he never has the blues. He loves company. Through a large part of California the Bush-tits forage about in flocks nearly nine months of the year. In Oregon and Wash-

Love of Companions ington, they come in the spring, nest and depart in the fall. A flock of Bush-tits is always restless. The Juncos, like the Bush-tits, stay in flocks a large part of the year. I have often watched them about my

home. After a hunt for food and their hunger is satisfied, they sit about in some tree resting and preening themselves, and their continual twittering gives the impression of a real bird concert. Bush-tits are great talkers. But I have never seen a flock stop for a rest. Their appetites never seem satisfied. A flock forms a continual moving excursion. A few always take the lead, bobbing along in tippling flight from tree to tree. Others follow rapidly, and, when they take possession of a bush, it looks as if the whole thing had suddenly taken wings.

The Bush-tit has no distinctive color-marks, such as the white tail feathers in the Junco; but he has a series of call-notes that are of great importance in keeping each member of the flock informed as to where the others are. In Volume V, No. 4, of 'The Condor,' Mr. Joseph Grinnell has a very interesting article on the call-notes of the Bush-tit. In this article he notes a very characteristic habit of the Bush-tit that I have observed on several different occasions.

I stood, one day, in an alder copse watching a flock of Bush-tits that were hunting through the branches. It was a family of young birds. Each had learned to keep up a constant *tsre-e, tsre-el tsit! tsre!* as if continually saying something. But this gossip was not so much for the sake of the conversation as to keep the whole flock constantly together.

While I was watching, three or four of the midgets were within a few feet of me. One of the birds in the next tree began a shrill quavering whistle, and instantly it was taken up by every one of the band. The two birds near me, as well as every one of the others, rose to their perches. Had I not known, I couldn't have told just where the whistle was coming from; it sounded so scattering, like the elusive, grating call of the cicada. Then I saw a Hawk sweeping slowly overhead, and the confusing chorus lasted as long as the Hawk was in sight; nor did one of the little Bush-tits seem to move a feather, but just sit and trill in perfect unison. It served as a unique method of protection: the whole flock had learned to act as a unit. It would have been hard for an enemy to tell where a single bird was, the alarm note was so deceiving, the birds so motionless, and their clothing harmonized so perfectly with the foliage.

There are several varieties of Bush-tits, living from Washington down to western Texas. All are very much alike, uniform gray or brownish in color, darker above and lighter below, except the species that one may see in the mountainous regions of western Texas and northern Mexico. In this locality, the Bush-tit has a black patch on the side of its head. Through the western part of Oregon and Washington, the Bush-tit often nests in willows, hemlocks and hazels, and the site selected is usually from six to eight feet from the ground. In California, the oaks are favorite nesting-places. Here the Bush-tit builds largely of lichens, plant fibers and feathers.

The Bush-tit is a master-builder among birds, for he builds a real bird mansion. I once watched a pair of these tiny creatures lay the foundation for a

**Building
the Home**

typical long pocket-nest. I say, lay the foundation; but really the Bush-tit does not follow our ideas of architecture, for he shingles the roof first and puts in his uprights and his floor-joists last.

After the pair of lovers had selected a site for a home in a hemlock tree, they began weaving in some cross-pieces between the twigs. Then they left a place for a round doorway, and began weaving the walls of moss, fibers and lichens. This was to be the hallway down to the main living-room. The outline of the long pocket was built, and then filled out from the inside. The feather lining was added last, and this required a great amount of hunting. When one of the Tits came with a feather, he would pop down into the nest, and the whole structure would shake and bulge, as the little fellow worked and fitted the material in just where it was needed, and out he would come to continue the hunt. It seemed they would never get enough feathers; for, even after some of the pure white eggs were laid, whenever in their travels the pair would run across a feather, back they would come and add it to their bed.

In some parts of Oregon where the moss hangs in long bunches to the limbs, the Bush-tit uses this natural beginning for a nest. I saw one of these birds build its home by getting inside a long piece of moss and weave it into the wall of the nest. At another time, I saw a Bush-tit's nest that was twenty inches long. The little weavers had started their home on a limb, and it was evidently not low enough to suit them, for they made a fibrous strap ten inches long and then swung their gourd-shaped nest to that, letting the nest hang in a bunch of willow leaves.

I never had a good idea of the amount of insect food a Bush-tit consumed until I watched a pair of these birds a few days after the eggs were hatched.

Appetite Both birds fed in turn, and the turns averaged about five minutes apart during a large part of the day. The parents were busy from dawn till dark. They searched the leaves and twigs, the branches and trunks of every tree; they hunted through the bushes and grasses and ferns, and food always seemed to be abundant. Sometimes they brought caterpillars, moths and daddy-long-legs, that one could see, and again they brought bills full of larvæ, plant-lice or scale insects that one could not recognize. One pair of Bush-tits about a locality means the destruction of an untold number of insect pests. If we could but estimate the amount of insects destroyed by all the birds about any one locality, we should find it enormous. Without the help of these assistant gardeners, bushes and trees would soon be leafless.

The Bush-tit does not possess the aerial grace of a Swallow, or even the nimbleness of a Warbler. He bustles along in such a jerky way he often looks as if he would topple heels over head, and go whirling to the ground like a tailless kite. He is not so successful a wing shot as the Flycatcher, but he has an eye that few birds can equal in stalking. He is a good assistant to the gardener, for he is at work early and late and constantly at it.

Prof. F. E. L. Beal, of the Biological Survey, has made a careful study of the Bush-tit and its relation to the fruit industry on the Pacific coast. Three hundred and fifty-three stomachs of Bush-tits were examined.

Food Habits They were collected during every month of the year, the greater number being taken during the spring and summer. The fact that less than one per cent of the food of the Bush-tit consists of fruit, and that over four-fifths of its diet consists of insects and spiders, nearly all of which are harmful, shows that the bird is a very valuable resident of any fruit-growing or farming district. According to Professor Beal, the largest item in the insect portion of the Bush-tit's food consists of plant-lice or bark-lice or scale.

The San José scale is one of the most pernicious and destructive pests to the fruit-growing industry on the Pacific coast. As this scale is very small and its distinctive character so minute, it is very difficult to identify positively after it has been eaten by the birds and is mixed with the other food in the stomach. Some species, such as the olive scale, are larger and more easily identified. Out of the total of three hundred and fifty-three stomachs examined, one hundred and thirty-eight held scales. Several stomachs were entirely filled with them. So it is certain the Bush-tit devotes a good part of his time toward destroying scale insects, which do so much damage to fruit on the Pacific coast.

Professor Beal examined one brood of eight nestlings about ten days old. The stomach of every one of these young birds contained pupæ of the codling-moth. Two stomachs contained two each, two contained three each, one contained four, one seven, one nine, and one eleven.

Food of Nestlings The place where Professor Beal secured these young birds was in an oak tree along a stream that bordered a neglected orchard. The parent Bush-tits hunted through this old orchard, and did much to keep down the horde of insects that thrived and lived there. This is the Bush-tit's life-work. It would be difficult to find a small bird that is a more valuable asset to any farmer or fruit-grower.



MAKING FRIENDS WITH A BUSH-TIT FAMILY

Photographed by H. T. Bohlman

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 141 Broadway, New York City

Notice of the Annual Meeting of the National Association of Audubon Societies

The annual meeting of the members of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, for the election of a director to take the place of William Dutcher, whose term of office will then expire, and for the election of an Advisory Board of Directors, as provided for in the By-Laws, and for the transaction of such other business as may properly come before the meeting, will be held at the American Museum of Natural History, Columbus avenue and 77th street, in the Borough of Manhattan and City of New York, on the twenty-sixth day of October, 1909, at ten o'clock A.M.—T. GILBERT PEARSON, *Secretary*.

How to Attract Birds

There is evidently a growing interest in the subject of how to attract birds, from the number of inquiries that are being made at the headquarters of the Association. This work is not only extremely interesting and entertaining, but is also economically valuable. In a recent communication from Prof. H. A. Surface, Economic Zoölogist, of Pennsylvania, he writes that the total loss to apple-growers in his state for the present year will amount to over one million dollars from the codling-moth alone. He adds this strong endorsement regarding attracting birds: "It has been observed with certainty that, where birds have been encouraged around premises, the codling-moth pest has been considerably reduced."

Dr. John C. Phillips, a life member

of this Association, gives the following interesting story of his success with the Berlepsch nesting-boxes:

"Last March, seventy-five of the Berlepsch nesting-boxes and three of the food-bells were received from Herman Scheid, Buren, Germany. The total cost of this shipment delivered at Wenham, Mass., was \$44.29. During the winter, the English Sparrows had been persecuted as much as possible, but no other bird-attracting work was done. Seventy of the boxes were placed in position, by the sixth of April, in the woods, orchard, and about the farm buildings. Within a few days, the Bluebirds were seen flying in and out of those boxes nearest the farmhouse.

"As to the sizes, there were far too many of the A1 ($1\frac{1}{8}$ inches opening). None of these apparently have been occupied. Box A ($1\frac{1}{4}$ inches) was used by the Tree Swallows, in preference apparently to Box B ($1\frac{3}{8}$ -inch opening) which they also used. There were a number of Box B, but, owing to a mistake, none of size C ($2\frac{3}{8}$ inches). The very large size D ($3\frac{1}{4}$ inches), of which eight were received, were placed about the lake, in the hope of attracting Wood Ducks,—so far without result.

"In general, the results from a very hasty survey have been as follows: The boxes were placed too late to attract the winter and local birds. Nearly all the boxes placed in the orchard were occupied by Bluebirds and Swallows, with a fair sprinkling of English Sparrows. Those placed in the woods were probably none of them tenanted, although no very careful survey has been taken. Many of the boxes at a distance from the house were gnawed badly by red squirrels. (A ring

of sheet metal placed around the opening might be of use in these cases.)

"Boxes under the eaves of a shed and in very exposed places seemed to be preferred by the Swallows. One Swallow occupied a box on the trunk of an apple tree, not four feet above ground. It is fair to say that the orchard to which the birds were attracted had never been used by the 'hole-nesting' birds before, as the trees were young and devoid of hollow limbs, etc.

"As regards future work, it is proposed this fall to place in position a large number of boxes, mostly sizes B and C. More favorable sites will be chosen, and the denser parts of the woods will receive a smaller proportion.

"The English Sparrows and the red squirrels will be consistently shot and trapped during the whole fall and winter. The Crows will be negotiated with a decoy Owl, Crow decoys and Crow call.

"The winter birds will be regularly fed under improvised shelters and with the food bell. The Berlepsch 'feed tree' will also be tried. Elongated, curved forceps will be obtained for extracting young English Sparrows from the boxes.

"Considering the lateness of the season at which these boxes were put out, the results appear to me to be very encouraging. If, however, the Sparrows are not kept more or less under control, I believe the placing of the nesting-boxes will be found of very doubtful advantage, as they offer ideal conditions for the increase of *Passer domesticus*."

The Association has been unable to find any manufacturer who will furnish nesting boxes at a price that approximates the cost of those manufactured in Germany, plus the duty and freight. Several large orders for these boxes and food bells have just been forwarded to Germany, at the request of some of our members.—W. D.

Indiana News

In addition to the rigid enforcement of the law, Z. T. Sweeney, State Fish and

Game Commissioner, has for several years carried on a campaign of education among the boys of the state, through the parents and public schools, with the result that there is far less destruction of birds' nests in the spring and far less killing of birds in the spirit of wantonness. In this work, the Commissioner states that he has been greatly assisted by the Indiana Audubon Society.

Work of this character is highly approved of by the National Association, as it is undoubtedly a fact that work among the children produces far better results in bird-protection than any other line of effort.

A Friend of the Farmer

Miss Rose Williams, of Newark, N. Y., one of our valued members, reports the following interesting item: "A Pheasant was run over by a mowing-machine a few days since, and was killed. As there had been some discussion among the farmers of this locality regarding the food of the Pheasants, and as some of them claimed that the birds ate a great deal of grain and corn, the crop of this Pheasant was opened, and in it were found over two hundred potato bugs."

If these introduced birds have acquired a taste for potato bugs, they will prove valuable machines for every farmer to own and distribute wherever these insect pests are found.

Old Man Island Reservation

Captain Small, our warden, sends the following interesting report: "This has been one of the best seasons for the Ducks and Gulls I have seen during my term as warden. The Eider Ducks left the reservation on the 15th of August, and the Gulls are all large enough to fly. I found that one Duck laid and hatched her young on Cape Wash Island, about one-quarter of a mile from Old Man Island. I saw her coming from the brush, and have seen the young Ducks on the island. There were about fifty Eider Ducks this season,

male and female, and I think there were about sixty young Ducks on Old Man Island and four on Cape Wash Island. The Gulls took quite a jump this season. I am calling them two thousand five hundred old birds and two thousand eight hundred young."

How to Attract Martins

Mr. C. E. Hamilton, superintendent of Heart's Delight Farm, Chazy, New York, writes that they have probably one of the largest colonies of Martins in the country. The accompanying illustration shows their two Martin houses. The smaller one, in the foreground, was occupied by a colony of from two hundred and fifty

arrive in the spring they all come in one flock, and seem to have flown a long distance, as they are very tired. They usually arrive in the afternoon, and will lie on the roofs and ground nearby, completely exhausted. On several occasions, we have picked them up, and they were so tired out they did not attempt to get away. They seem to be very prolific, and are an exceedingly nice bird to have around the place."

About the Aigrette

Mr. Julian A. Dimock, the well-known explorer, photographer and magazine writer, sends us the following appeal: "Better than most men, I know the devas-



MARTIN HOUSES

to three hundred birds during the present summer; the other house, unfortunately, was not completed by the contractors in time for the Martins to occupy this year; it has accommodations for five hundred birds.

Mr. Hamilton sends the following natural history item: "One very interesting feature about these Martins is, that when they

tating results of plume-bird hunting in Florida; therefore, it is to aid in the fight against the total destruction of Florida bird life that I appeal to you. Of his experience in plume-hunting in the Ten Thousand Islands a hunter-boy thus spoke to me. The first day he and his brother shot a few birds in the rookery. The next day the little birds, orphaned

by their shots, were hungry, and calling so plaintively for frogs and fish that his heart melted.

"I couldn't stand it, hearing those hungry little birds, and I needed the money awful bad. John and I went 'gator-hunting, and worked a month to make a day's wages of plume-hunting, but I couldn't stand the little birds.'

"This was the effect on a boy brought up to hunt and kill wild creatures, and it is to fight this needless cruelty—cruelty of a kind to revolt a hardened hunter—that I ask your aid for a law which can be opposed only by the selfish millinery interests.

"Every 'aigrette' sold in New York state means not alone the taking of a useful bird life, but the *starving to death of a little brood*; for, every allegation to the contrary notwithstanding, the aigrette of commerce is obtained only by shooting the parent birds at the nesting season. Florida cannot stop this traffic—geographical conditions forbid, but *you* can close the chief market to her plume hunters.

"Within my own recollection, the trees on the banks of the bays and rivers of the Florida peninsula were alive with birds of many varieties. As night approached, the air was filled with birds on their way to their homes in the big rookeries. Often the foliage of a key was hidden by the mass of birds, and the island made to look like a huge snow-drift. The small remnant has retreated to the fastnesses of the Big Cypress Swamp and the unexplored Everglades; but even here the hunters are following, and year by year the survivors get fewer and fewer. The market for the plumage of these beautiful, harmless creatures is partly furnished by your state, and it is because of this market that the slaughter goes on. As a citizen of the Empire State, I appeal to you to use your utmost efforts for a law to stop the 'aigrette' traffic in New York."

Contrast the above story with the item following; the first urges a public improvement; the other the selfish appropriation of a valuable economic public asset.

Interesting Items from the 'Millinery Trade Review'

"A meeting of importers and manufacturers of fancy feathers and jobbers of millinery goods was held at the Broadway Central Hotel, on Tuesday, June 29, to consider the feasibility of organizing a national association of millinery dealers for their mutual protection against unwarranted legislation by state or nation, inimical to their interests as importers, manufacturers and dealers in fancy feathers and bird plumage of all kinds and descriptions.

"In calling the meeting to order, Mr. Adelson said that at a previous informal meeting it had been determined to send out a circular letter to the principal houses of the country, both wholesale and retail, as a feeler, to ascertain their views regarding the forming of a national organization for mutual protection against the efforts of certain societies and organizations who are introducing measures in various state legislatures to prevent the buying and selling of foreign plumage. He said that, inasmuch as societies were organized in every state and principal city of the Union, and had a large following, and a literary bureau to expound their cause, it was necessary for the trade to meet them on their own ground, and adopt the same measures to enlighten the public as to their method of diffusing false statements regarding the use of bird plumage in millinery.

"The Feather Importers' Association of New York, according to reports sent out by the Secretary of State, paid \$4,200 to fight the bills introduced in the last legislature which they considered would injure the millinery business if enacted into law. These bills were introduced by Assemblymen Francis and Reed and Senator Platt, and were designed to prohibit the sale of the plumage of wild birds; also aigrettes, or feathers or plumage of herons.

"A statement of legislative expenses prepared under the anti-lobbying law was filed with the Secretary of State for

the Association by its president, Philip Adelson, which shows that \$2,780 was paid to Benjamin F. Feiner, and \$1,421 to James C. Sheldon, attorneys, who made arguments for the Association at legislative hearings."—August, page 50.

"The affairs of the National Millinery Association are in a very satisfactory condition. The good-will displayed toward this movement by the trade in general, is remarkable, to say the least. It points to the fact that the trade in general have had more annoyance from the Audubon activities than they care about for the future."—September, page 76.

"Certain millinery interests in this city [Boston] are about to coöperate with the New York dealers for the purpose of checking further legislation by the Audubon Society, in its endeavor to prohibit the killing of other than song birds for manufacture, and testing the law exempting from use the plumage of the heron and the barnyard fowl. For over two years, the millinery trade throughout the country has been seriously affected by the laws which, framed for the purpose of protecting the song birds, have been considered questionable and drastic.

"Said a prominent Boston millinery merchant: 'It is about time the millinery trade of the country should coöperate and help defeat some of the high-handed and drastic measures that the Audubon Society attempted to introduce in the State House. The ban against song-birds may be all right, but to include water-fowl and birds of prey in the list seems ridiculous.'"—September, page 94.

"_____ are constantly increasing their importations of novelty effects in aigrettes, gaura, paradise and all the other high-class novelties that are now being utilized in trimming the street, dress and evening hats. Whatever is desirable in bird plumage, in fancy feathers, wings and marabout, the goods are there to be had when needed, at prices consistent with the values that are offered."

"_____ report a phenomenal

business in ostrich, paradise and aigrettes. Their business in these staple goods is larger than ever before."—September, page 103.

The Sharp-shinned Hawk Again

In the last number of BIRD-LORE, Mr. Miller takes occasion to criticise the Leaflet on the Sharp-shinned Hawk. He says, in effect, that no doubt it is necessary, in order to get protection for the "beneficial" Hawks, to point out to farmers and law-makers the bird-eating species. This, of course, was the object for which the leaflet was written. Mr. Miller also says, in substance, that it seems wrong that the opportunity should be used to prejudice people against the Sharp-shinned Hawk by calling it a murderer and a convicted felon. Upon reading the leaflet carefully since its publication, I am inclined to admit that Mr. Miller's point is well taken. Unfortunately, perhaps, I did not learn that I was expected to prepare this leaflet until shortly before it was needed by the printer. Therefore it was hastily written, and no time was available for the careful revision which it otherwise would have had; but the matter that Mr. Miller objects to was not written with the intent of prejudicing anybody against the bird, but with the idea of making the leaflet more readable. I believe that Mr. Miller does not question the general accuracy of the leaflet, but only the manner of stating the facts. My personal attitude toward the Hawk is exactly the same as his own. This Hawk is one of Nature's means of restricting the undue increase of other birds, and preventing the perpetuation of disease, weakness, etc., by destroying the sick or unfit. Nevertheless, the destruction of the young of game-birds and poultry, and the excessive killing of song-birds by this Hawk, certainly is unfortunate from the standpoints of the bird-protectionist and the game preserver, who are attempting to increase the numbers of birds upon their own grounds.

Mr. Miller's contention, that the

present number of small birds is probably about all that can be maintained by the food supply, is not borne out by my experience, under the conditions now prevailing in many localities where man's influence has decreased the numbers of birds and where cats and other enemies of birds are numerous. Protection, shelter and increased nesting facilities at such points have been known to increase the number of birds 200 per cent or more within a short period, to the great advantage of the farmer or the owner of the land. Such an increase of birds is very likely to attract the Cooper's Hawk or the Sharp-shinned Hawk, with such results to the smaller birds as were shown in the leaflet. Since the leaflet above referred to was written, another season's experience with the Sharp-shinned Hawk has given abundant confirmation to the statements made therein regarding its destructiveness. I shall hope to have an opportunity to give to the readers of BIRD-LORE the results of this season's experience.—EDWARD HOWE FORBUSH.

Legislation in New England

VERMONT.—The report on legislation in New England published in the last number of BIRD-LORE failed to record the passage of a provision for the protection of Quail at all times in Vermont until September 15, 1911.

It is important, also, to note that an act was passed giving the Governor power to issue a proclamation prohibiting all shooting for a definite period during any dry time when there is danger of forest fires. Protection from forest fires is essential, as many birds are destroyed or driven out by fire.

MAINE.—Your agent was unable to go to Maine on account of calls to New York and Washington, and Mr. Arthur H. Norton, President of the Maine Audubon Society, was incapacitated for a long time, owing to a serious illness. Nevertheless, although several bad bills were introduced, the only one that passed was an act allow-

ing the killing of the "Golden-eye, or Whistler," in the county of Hancock, from November 1 to April 1. This bill should be repealed at the next session of the legislature.

MASSACHUSETTS.—A similar act to that passed in Vermont for the protection of forests against fires in the hunting season was passed in Massachusetts.

An act was passed allowing land-owners to rear and sell Pheasants under rules and regulations made by the Fish and Game Commissioners and approved by the Governor and Council. It is hoped that this act will encourage the artificial propagation of Pheasants, and that the sales of these birds in the market will take the place of the illegal, surreptitious sale of Grouse.

The bill for the protection of shore, marsh and beach birds, establishing a close season on Rails, Gallinules, Plovers, Snipe and Sandpipers between the 31st of December and the 1st of August, was finally passed on one of the last days of the session and signed by the Governor. This bill protects the Piping Plover and Killdeer Plover at all times.

Unfortunately, however, during a two-days' absence of your agent in Connecticut, the bill was reported and passed both Houses, under the suspension of the rules, in a form which included the word "quarks" in place of "coots." This change was originally made in the House at the instance of one of the enemies of the bill. The word "quarks" was then stricken out in the Senate, but was again inadvertently inserted by the Conference Committee in the final draft of the bill. Owing to the fact that the close of the session was near, and that unanimous consent would be required to reconsider the vote, it was sent to the Governor in this form, otherwise it would have been defeated.

The wording of the bill is as follows: "or any of the *Rallidæ*, known as rails, gallinules, quarks or mud-hens,"—"quark" is one of the common names used in Massachusetts for Night Heron.—E. H. F.

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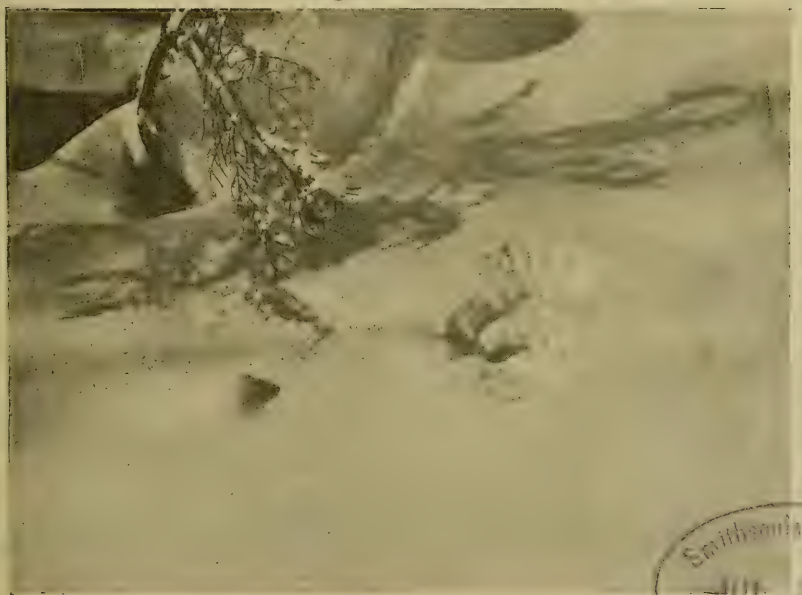
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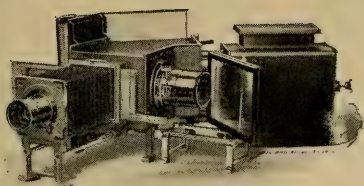
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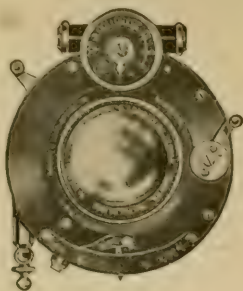
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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XI

NOVEMBER—DECEMBER, 1909

No. 6

A Day with the Birds on a Guiana Savanna

By C. WILLIAM BEEBE

With Photographs by the Author



KISKADEE FLYCATCHER

NEW lines of communication have made it possible to reach wild portions of South America in a comparatively short space of time. If we sail from New York City on one of the comfortable Royal Dutch Mail Steamers, we will reach Georgetown, the capital of British Guiana, early on the morning of the ninth day. Let us see what it is possible to observe in the way of bird life on this same day. Taking the trolley to the railroad depot, we can easily catch the 7.30 train, which takes us southward along the coast, and will enable us to reach the little station of Belladrum, two hours later. The land all along the coast is a flat, marshy savanna, dotted here and there with coolie huts and tiny rice fields.

Throughout the whole distance, quantities of birds are constantly in sight; small Seed-eaters¹ and Scarlet-breasted Blackbirds,² associating in flocks of hundreds with the equally brilliant Little Yellow-headed Blackbirds.³ When a flock of eight hundred or a thousand of these two latter species rise up *en masse* from the dull green reeds, the flash of color, scarlet, yellow and black, is most beautiful.

At the Abary river, we enter a small launch and start up stream for a twenty-mile journey inland. Blackbirds are as abundant as ever, and on all sides, as far as the eye can see, scattered over the marshes are American Egrets,⁴ each standing apart from its fellows and fishing in the numerous small creeks. Here and there among them are Wood Ibises,⁵ and at last we discover the bird for which we have been searching—the Great Jabiru,⁶ or ‘Negrocop,’ as the natives call it. These splendid storks tower high above the herons, and with their jet-black

¹*Sporophila* sp

²*Leistes guianensis*

³*Agelaius icterocephalus*

⁴*Herodias egretta*

⁵*Mycteria americana*

⁶*Jabiru mycteria*

heads and red neck-pouches are visible a long distance away. As our launch puffs along, Jaçanas¹ fly up in pairs with loud cackling notes; their dark chocolate and pale yellow colors flashing conspicuously. Tiny Comorants,² in groups of from four to ten, spatter ahead of us now and then. Snakebirds³ are less numerous, but far from uncommon. One of the most abundant larger birds is the Cream-headed Hawk,⁴ to which small birds pay no attention, as it feeds only on insects and mollusks.

From every bush along the bank, there fly one or more of the small Guiana



BUNGALOW ON ISLAND IN THE SAVANNA. THE AUTHOR'S HEADQUARTERS

Green Herons,⁵ leaving their nests, which are built close to the surface of the water. Much more wary, and never allowing us to approach closely, are the beautiful Great Cooi Herons.⁶ About eleven o'clock, we see in the distance what appear to be great patches of burnt reeds. But, as we draw near to these, we are astonished to find that they are phalanxes of Ducks. Nearer and nearer we approach, and at last those nearest us take to flight, passing back over the heads of the others. Then hundreds begin to rise at once, until, for fifty yards or so, there is a literal wave of birds rising on each side of the river, flying upward and backward in two vast unbroken sheets.

¹*Parra jacana*

²*Phalacrocorax vigua*

³*Anhinga anhinga*

⁴*Busarellus nigricollis*

⁵*Butorides striata*

⁶*Ardea cooi*

From this mass, giving forth a shrill whistle which soon deepens into a perfect roar of wings, single lines of Ducks shoot out in all directions, passing up the river on right and left over the savanna. They are Gray-necked Tree-ducks,¹ with a thin scattering of Rufous² and White-faced³ Tree-ducks. The great wave of life never ceases for a moment, but widens and thickens, and wheels behind us, until the whole sky is pitted with their bodies. I take picture after picture, with the ground glass revealing myriads of swiftly moving birds. We count those in one short line near us, and find there are 420 individuals. It is impossible to count the whole number, but there must be at least fifteen or twenty



LAGOON AND SAVANNA FROM THE BUNGALOW

thousand in the first great flock of Ducks which we encounter. Little by little the Ducks settle down on the savanna, and soon nothing is visible except hundreds of their heads and necks stretched high, and all watching us curiously. These birds are Tree-ducks only in name, as next month hundreds of eggs will be found scattered all over the savanna, and the flocks will gradually dissolve into pairs, each to nest on some sheltered hummock in the marsh. In the course of the trip, we pass several such masses of Ducks as I have described, while smaller flocks of several hundred are constantly passing overhead. Now and then we hear a louder whistle of wings, and a family of four or five great black Muscovy Ducks⁴ rushes past, the leader, a drake, being almost twice the size of the others.

A low line of shrubs and small trees appears along the right bank of the narrow winding river, in which Great Kiskadee Flycatchers⁵ are nesting every hundred yards or so, and Smooth-billed Anis⁶ flutter awkwardly and utter their harsh

¹*Dendrocygna discolor*²*Dendrocygna bicolor*³*Dendrocygna viduala*⁴*Cairina moschata*⁵*Pitangus sulphuratus*⁶*Crotophaga ani*

notes from almost every bush. At length we come in sight of a small bungalow, built on a little island, some five acres in extent, the only high land we find in all this region. This island has an interesting history, as it was thrown up by the runaway slaves who fled thither sixty years ago, and tried to eke out an existence



TREE DUCKS OVER THE SAVANNA

in this desolate region. It would take many pages to describe the wonderfully interesting fauna of this little island, and I have space only to touch on several of the more interesting birds. The Hoatzins,¹ those strange reptile-like birds, are abundant in the shrubby growth which lines the western side of the river. This growth has been cut away between the island and the river, and at five o'clock each afternoon the Hoatzins, from far down the river, will collect at one edge and, after many false starts, will fly, one by one, across the open space and back again, within fifty yards of our hammocks. Only a few are strong enough to make the whole distance at one flight, the others falling down helplessly into the marshy reeds. They nest within sight of the house, and at this time (mid-April) are sitting on their eggs. One comes and perches for a time on one of the beams of the veranda, and every afternoon and early morning the air is filled with their hoarse croaking chorus.

Jaçanas lead their tiny black broods over the lily pads to the very edge of the island, now and then cackling in fright as a crocodile pushes up his snout near them. The deep black lagoon surrounding the island is filled with life: Fishes of many kinds, most of them small and brilliant in color; although occasionally a big tarpon noses his way in from the river beyond. Terns of two species, the Great-billed² and the Little Eye-browed Tern,³ fish all day long within a few yards of the island.

¹*Opisthocomus hoazin*

²*Phaethusa magnirostris*

³*Sterna superciliaris*

In the evening, the creatures inhabiting the water of the lagoon begin to stir into action. There is one crocodile of large size, not less than nine feet, and a host of others two or three feet in length, and these bellow and grunt loudly at intervals. The most noisy creatures are the otters, some of which are six feet from head to tail, and which slip through the water almost as rapidly as the fish. There are a few capybaras here, but we see nothing of them except their foot-prints.

A half-dozen trees on the island afford nesting-places for many species of birds. Yellow Orioles¹ nests are common, and the Gray-breasted Martins² have already built among the rafters. Three kinds of Tyrant Flycatchers and two pairs of the little Todirostrums,³ have their homes here, while a pair of Guiana House Wrens⁴ are nesting in a hollow stub at the very steps of the porch. A Cotton bird,⁵ or Pied Ground Flycatcher, and a White-headed Tyrant⁶ both have half-finished nests in the nearest trees, and a pair of Great Rufous Kingfishers⁷ have bored into a very poor apology for a bank nearby. At dusk, two species of Goat-



HOATZIN

suckers begin to call. One kind says very distinctly "Who are you?" with the accent on the first and last syllables, while the other species we recognize as the Parauque⁸, from its liquid double note. Through the night, as a background of sound, for the occasional noises of crocodiles and night-birds, is the never-

¹*Icterus xanthornus*²*Progne tapera*³*Todirostrum cinereum*⁴*Troglodytes musculus clarus*⁵*Fluvicola pica*⁶*Arundinicola leucocephala*⁷*Ceryle torquata*⁸*Nyctidromus albigollis*

ceasing hum of the myriads of mosquitos, which strive to penetrate our hammock nets, and a few of which invariably manage to find their way in. Early next morning, with the first whistle of wings of a passing flock of Muscovy Ducks, the sun appears upon the distant savanna horizon. A loud clattering of beaks draws our attention upward to a line of seven Jabirus flying over the house; a deep-voiced note, *A-rú-co! A-rú-co!* announces the presence of a Horned Screamer¹ behind the bungalow, and another tropical day has dawned.

¹*Palamedea cornuta*

TO A COLLECTION OF BRAZILIAN HUMMINGBIRDS

Dainty notes of airy thought,
Iridescent fancies caught
On a web by magic wrought
 To a bird's dear guise!
Starry lusters, steely glints,
Flower and flame and sunset tints,
Volitant, stray color-hints
 That elude mine eyes!
Off, with you, to lands remote,
Cousins of my Ruby-throat—
Off, in South-sea dreams afloat,
 Now my fancy flies!

Where strange flowers their odors flung,
You on vibrant wing have hung,—
Probed for sweets, with arrowy tongue,—
 Honey-wine and meal!
I'll not think how, as you sipped
From those blossoms, Circe-lipped,
You of light and life were stripped!
 Rather, let me feel
I can see you, as you poise,
Hovering, with a dream-like noise;
Let me share those flowery joys,—
 Deep in warm Brazil!

—Edith M. Thomas.

Notes on Alberta Grebes

By JOHN M. SCHRECK

With Photographs by the Author

COMING to the Canadian Northwest, near Edmonton, from an eastern city, the great variety and abundance of water-fowl seemed to attract me most, for in my eastern home the opportunity to see and study these birds was limited to the period of their hurried passing to and from the breeding-grounds. Every little slough and pot-hole had at least one pair of Ducks or Grebes nesting about it, and localities of this nature are very plentiful in northern Alberta. During my first season I often passed a pot-hole where a pair of Horned Grebes seemed at home, but at first I could not locate anything that looked like a nest.



HORNED GREBE REMOVING COVERING FROM EGGS ON RETURNING
TO NEST

A few days later, I stopped at the edge of woods surrounding their miniature lake and scanned every clump of grass with my glasses, and was rewarded by seeing Mrs. Grebe on her nest well out from the shore in a clump of slough grass. As I approached the shore, she slipped off the opposite side and swam off under water; not being used to such tactics, it is no wonder I did not locate her sooner.



NEST OF THE HORNED GREBE

I rigged up a blind of limbs near the nest, and concealed a camera among them. That afternoon, both birds hovered around, and did everything except go on the nest. A few times one climbed up to the nest, only to cross and dive in on the other side. It was very amusing to watch them swim slowly away sideways, then turn and swim toward the nest at high speed, their heads nodding at a great rate, but, as they approached, their courage failed them.

The next few days, I found that they had become accustomed to the blind and paid little attention to the addition of the camera, and I secured some interesting photographs of the Grebe removing rubbish from her eggs, etc. The Holboell's Grebe is very common in this vicinity, but is usually in small colonies in the larger sloughs and small lakes. On several occasions, I witnessed the interesting sight of young Grebes riding about on their mother's back, taking a boat-ride, as it were. The Western Grebe I have seen only in fairly large colonies, and then only at a few of the larger lakes. Eared and Pied-billed Grebes are also noted in this vicinity, but not so commonly as the others.



HORNED GREBE ON NEST

A Heath Hen Quest

By KATHERINE E. TIPPETTS

WHEN, a few years ago, a Boston paper came out with the startling headline "Bill passed to protect the Heathen on Martha's Vineyard," it seemed to the uninitiated as if the legislature was usurping the rights of the home missionary. To those more fully informed—the game-commissioner and bird-lover—it appeared a huge joke.

The island of Martha's Vineyard, Massachusetts, is the home of a recently almost extinct game-bird, *Tympanuchus cupido*, the Heath Hen,—or, to use the vernacular of the islander, 'Heath'en.' The clever writer of the article mentioned, wishing no doubt to introduce a touch of local color, had used the name Heath'en, and the apostrophe had been lost in the setting up.

Although this headline caused many a smile, the bill in itself was no joke, as was proven recently when, in company with a number of other Audubon Society members, I visited the Heath Hen in its native haunts, and talked with the warden the bill had made possible.

It had been four years since I first saw *Tympanuchus*, and that just before he was protected. I had wandered over dune and dune and penetrated vast jungles of scrub-oak for two seasons, in company with another bird student, seeking his whereabouts. As our second strenuous season was about ended, we were rewarded most richly. I can feel the tingle of startled joy—the rapture—return after four years, as I recall this first appearance.

The day was in mid-September,—a luminous, song-lilting sort of day. We had left the aster-starred downs and come into the undulating country, where the slopes were already taking on a mosaic of colors which must ever be the despair of the realistic artist.

We were not dreaming of "elusive Tym," as I familiarly designated the object of our quest, amid all this glory. Further along, within the scrub-oak thickets, we might find some trace of him, but hope had long since become tinged with resignation.

The ubiquitous Kingbirds flitted saucily before us, and the Towhees rustled in the dry leaves under the bushes. We entered the edge of the forest of scrub-oak reverently. One does learn to revere the unattainable. And what more unattainable than a glimpse of *Tympanuchus cupido* these last two years? A mighty scurrying to our left. "Rioting Towhees," I exclaimed, and then gasped "Heath Hens!"

There they were—a pair of them—looking as natural as the stuffed specimen in the Museum of Natural History. They crossed an open space, looking backward nervously, and entered a clump of oaks. We came up on opposite sides, surrounding and surprising them once more. They evidently planned to escape by skulking rather than by flight; but when we followed close upon them, even in dense cover, were we electrified by a whirring sound, as one large bird shot

upward in a straight line which bent as the flyer progressed. We could see him winging strongly, then resting apparently a-wing, —but it was all over in a few moments. The dark shape dropped into the far-away oaks as suddenly as it had arisen. Meanwhile the mate had scuttled into the unknown. We hunted her for hours with no success. Then came three years' absence from the island. In the meantime, the bill for protection and the warden came into being. This brings me to the present quest.

We were taken to the warden's house by the most enthusiastic of guides, a local clergyman, who has a long check-list of island birds, and a fund of knowledge not gleaned altogether in bird-books.



HEATH HEN

From a mounted specimen in the American Museum of Natural History. Reproduced from *BIRD-LORE* for April, 1903

After a long drive, we reached the warden's house, which is set in the midst of the scrub-oak district. No one was at home save a chained dog and two captive Red-tailed Hawks. The Hawks eyed us suspiciously, but consented to pose for their pictures, after we had assured them of our kindly dispositions by presenting portions of our lunch. Vast quantities of cleanly picked bones lay all about their wire home, telling of voracious appetites or a long captivity.

In a barn at a distance from the house, we found a man at work, a Portuguese, from whom we learned that Heath Hens were seen in that vicinity. He thought we might find nests and seemed ready to promise us any pleasure, especially after we engaged feed for our horses.

"Nests in July!" I exclaimed. "Why, I have heard they nest only in May, or earlier. They do nest in May, don't they?"

"Y-as," he assured me placidly, "July—May."

"You have seen the nests perhaps," I continued; for I had not then seen the warden and learned how difficult this was.

"Y-as," he effervesced. He had "Y-as" ever ready on his lips, and let it fall as gently and soothingly as summer rain.

"What were the color of the eggs?"

"Color? White—yellow," he declared. "Y-as."

"Oh, no, light green," I corrected, airing my book knowledge.

"Green? Y-as," he acquiesced cheerfully—"all green."

This was bad enough, but, when we spied a man hoeing corn, we came upon something worse. We reached him after crossing row after row of freshly hoed corn. His arm flew out with automatic precision, and as we approached we stood in danger of being hoed under with the top soil.

"Good-morning." The head was lifted.

"I had a distinct shock," said one of the party afterward, "and visions of the Mafia, in one glance."

The scowl on his face made us wary.

"Will you please tell us if you have seen any Heath Hens around here?" I asked most conciliatingly, and smiled. Instantly there was a strange contortion of features. The man looked bland, but remained dumb,—another Portuguese.

"Call them Heath'en," some one advised.

"Heath'en," I repeated. "Are any around here?" My arm swept in the surroundings.

"The Man with the Hoe" eyed our cameras and field-glasses with brightening eyes.

"Y-as, blueberries. All here." He repeated my sweep of arm, deciding, no doubt, that our cameras were American inventions for holding berries.

"No, not berries—birds!" I shouted. "Big birds." I did everything but fly, to enlighten him.

"Ya-s,—blue birds!" The smile had grown expansive. Colors seemed to appeal to the nationality. Thanking him for the time we had taken, we retraced the difficult way.

The corn-field, however, proved our Mecca. Early in our quest I had quoted from various authorities regarding the ways of the Heath Hen, speaking of a habit they were said to have of coming out to the public roads at times to dust themselves.

As we neared the edge of the cornfield, we startled the very bird we were in search of, engaged in this occupation. The flight was our first intimation of its presence. We stood straining our eyes to catch each movement of the oblique flight till it dropped amid the scrub oak far distant. This time there was scarcely a sound, as on that first occasion when *Tympanuchus* had gone upward with an alarm-clock accompaniment. We searched for the mate or possible chicks, but none were found; so we concluded the bird had come alone to dust its feathers, while the rest of the family took their noonday nap. There, in the loosened

sand of the cornfield, was left his wallowing hole, deep, round, and as large as a basin.

Later, in clear spaces amid the oak growth, we found bare cavities which we thought might also be wallowing holes.

It was hot, strenuous work, invading the scrub-oak, although I must say it was really easier than it had looked at first sight. To glance across acre after acre of such a growth, on what is called the greatest extent of level country in Massachusetts, and to think of covering the same, with the thermometer above 80°, and under a sun which seemed to have migrated with the birds from Florida, is no alluring prospect, even when buoyed up by the recent discovery of an almost extinct Heath Hen.

Why it was easier lay in the fact that these clear spots existed. One could not see them from the road. Instead, the oaks seemed to touch and interlace in the most intricate manner, protecting their wary habitants from intrusion.

After braving this formidable breastwork, however, and battling awhile with tough boughs and snapping twigs, the delight of these oases can be imagined. Blueberries grew and shrivelled here for lack of rain; but *Tympanuchus*, no doubt, likes them that way, for he is said to be as averse to moisture as a turkey, and his usual diet of small acorns, buds and occasional leaves, must make dried berries seem quite luscious by comparison.

The existing drought had caused the blueberry leaves near the ground to assume a fiery red, relieved here and there by dainty white asters—the most soothing thing in nature we encountered,—although some belated goat's-rue caused us to cry out in admiration of the pastel-coloring of its ripened bloom, so much more artistic than when first opened. Sun-heated sweet fern filled our nostrils, wafted hither by a redeeming "sou'-wester."

The sight of the first Heath Hen we had considered a stroke of good luck; but when a pair of them were "flushed" in the scrub at our right and shot upward, partridge-like, we blessed Dame Fortune, instead. One of them passed directly above our heads, showing the dark reddish brown bars on a breast of white, and in watching its strong flight we lost sight of its mate. Whether it flew as swiftly in an opposite direction or sank again was merely a matter for conjecture. But we may have "flushed" it again, for soon after, the same, or a fourth Heath Hen, whirled and flew aloft as the others had done.

Four Heath Hens in half as many hours! To be sure, our cameras had been too slow; but it was long past nesting-time, when one might hope to catch a family and attendant parent bird.

In spite of the rapidity with which they flew, we had good views of the birds, whose long routes in flying kept them for some time within the vision of our glasses.

On our return, sunburnt but jubilant, we met the warden, a sturdy-looking, determined young man, who listened to our tale of victory, and said we had done well at this season of the year.

In the winter, he told us, the birds came much nearer his home. That he fed them twice a day during extreme cold, but that they never came to eat the food he put out while he was in sight.

"No," he said, "I have never found a nest. Have I searched? Yes, but I have too much to do to make that my business. I heard one was found as early as April near the old Seaman's hospital, back of Vineyard Haven, but it was not proven."

"Is the Heath Hen increasing?" I asked.

"It is," replied he. "When I came here, about two years ago, there were less than sixty in the flock which came to feed in cold weather. This last winter I counted over a hundred. In my report to the Fish and Game Commission, I estimated the entire flock on the island at one hundred and fifty."

"That removes the fear of extinction," I concluded. "A game bird that triples in number within two years must survive, even if it never becomes as numerous as in the days of early Boston, when its common prevalence caused servitors to stipulate with their employers not to have Heath Hen served oftener than once a day."



ENTRANCE AND EXIT OF A RUFFED GROUSE'S NIGHT'S LODGING

Photographed by Richard S. Eustes, at Randolph, N. H., Jan. 1, 1909

The Ways of Bob-White

By FRANCES M. A. ROE

WE happen to be living at an old southern home at Port Orange, Fla., for a while, that has acres of grounds, immense oak trees with quantities of waving Spanish 'moss,' and where for years, birds and squirrels have been welcome to the best there is, be it the buds of early peaches, or the last choice persimmon. Close to one of my windows runs a picket fence, that separates the yard where there are flowers, tropical shrubs and fountains, from another part of the grounds where things have been left wholly to nature, and where, underneath the oaks, scrub palmetto and vines are thick. After seeing a beautiful gray squirrel on the fence two or three times, corn and wheat were put on the window-sill, and from that day on, squirrels, Cardinals and Blue Jays have been my constant guests.

Early in August, 1908, a pair of Florida Bob-whites began to make us almost daily visits, ever coming from the scrub. After seeing the birds on the window a few times, the cock flew up, but the hen was shy, and much clucking and coaxing was necessary, before she could be induced to join her mate.

The cock came alone, one day, and wishing to hear how affairs were at home, he flew up on the fence, and, facing the palmettoes, commenced to call loud and regularly. Just then a squirrel came along, and seated himself upon a post of the fence, about three feet from the Quail. He watched and listened a minute or two, but finally could stand it no longer, and slowly crept from picket to picket to the Quail, when he hesitated a second, and then actually put his nose on his wing, evidently trying to discover where such a tremendous noise came from! The cock seemed to consider it a friendly joke, for, except to turn his head a trifle the better to see him, he paid no attention whatever to the squirrel, but kept up his loud whistling. The squirrel went back to his post, every hair on his tail standing out straight, and there he sat in deep meditation, until the Quail flew away, when he jumped off as though something evil was after him.

Not long after that, there was a most pathetic sight. The two Quail appeared, and between them was just one little chicken. The hen looked dejected, and the chick acted as though it suspected there was something wrong with this big world, and kept close to its mother's wing. Possibly the little mother was thinking of a "might have been"—of an awful tragedy out in the scrub, when precious eggs and snakes were horribly mixed. But the cock's head was high, and his crest raised, and he plainly said "Isn't he a fine fellow." The chick was about the size of a Wren, and the lack of wing and tail feathers made his legs look absurdly long.

The little family made us frequent visits for a week or more, and the chick grew wonderfully fast. About this time another pair of Quail appeared, coming from a different part of the grounds, and whenever the two families would happen to meet here, the strange cock invariably tried to sneak up to the chick, evidently



MALE AND FEMALE QUAIL IN ORANGE GROVE
Photographed by George Shiras, 3d, Halifax River, Fla., April 1, 1908. (Courtesy National Geographic Magazine)

with a desire to tear him in pieces, but the father was ever on guard, and the fights between the two birds were often long and fierce. At the very first sound of the battle-cry, the chick would disappear and remain lost until the fight was well over.

On September 10, plaintive little sounds were heard, very much like the faint "peep" of young turkeys—and at once it seemed as though the ground itself was moving along, it was so impossible to distinguish the tiny Quail from the dead oak leaves. There were over twenty of the little brown things, and with them were two cocks and two hens! Just how the forced friendship had come about, we will never know, of course, but it was apparent at once that the two large families had become hopelessly mixed, although the Quail were just from the nest. The chick was there too, suddenly developed into a small cock, very independent, and scratched energetically for the babies, who commenced to eat wheat at once. Since that time they have grown amazingly, and as soon as they could fly, they came to the wheat on the window, and eight have been seen there at one time, each one singing his sweet little song of "wheat, wheat ah!"

The two families soon separated, but the wicked cock and his hen have only three of the chickens. They seldom come here now. The other cock is a grand bird, quite capable of managing his large covey. On one occasion three of the chicks loitered behind, and were slow in coming to the grain, and the ever-watchful father seeing this, ran around back of them, gave one a sharp peck that started him off, and the other two with him. The cock followed them slowly, and with great dignity. While the chicks are scratching and feeding—never longer than two minutes—he almost always sits on top of the fence at the corner of the house where he softly whistles his two notes—"all's well!" One day, however, he changed off to different notes, also very low, but which every little bird heard, and recognized as a warning, for instantly every one of them disappeared from sight—all but the two chicks that happened to be on the window, but they, too, squatted right there, and drew their little heads in. I have always thought that it was a bit of discipline on the cock's part—a kind of a "fire drill." He is a handsome bird, his back a bright cinnamon, and his crest jet-black. Several times when he has been on the sill, I have put my finger within two inches of his sharp little eyes. He must have seen it, of course, but both birds and squirrels seem to think that inside the glass and screen is another world that does not concern them.

This opportunity to study Quail almost daily, in their natural wild life; to watch their wonderful affection for each other; to learn their many calls, every one of which has a meaning, is as unusual as it is delightful.



An Aërial Gymnast

By CHARLES STUART MOODY, M.D., Sandpoint, Idaho

IT is doubtful if we ever learn all there is to learn about anything. Now, for instance, I thought that I could tell practically every event in the life history of the Golden Eagle, from his cradle in the old pine upon the mountain side to his grave in some "bird stuffer's" show window,—for I am convinced that that is the cemetery of practically all the Eagle family. I saw something last summer, though, that taught me never to be too cock-sure of anything.

The mountains of Idaho are peopled with Golden Eagles and the lake region of the northern part seems to be a favorite habitat for them. The aëries are scattered all around the shores of our larger bodies of fresh water, usually quite near the water's edge, but occasionally one will be found upon the crest of some sharp mountain peak, where a blasted pine has withstood the storms of centuries. Ornithologists say that the Golden Eagle often nests in clefts of rocks; but they never do so in this country. I have studied carefully the habits of the bird, have located innumerable nests, but never one in any other location than the very summit of a pine, or larch tree. The bird chooses, by preference, one that has been struck by lightning and entirely deadened, or, at least, the top killed.

My note-book speaks of the curious antics of an Eagle that we noticed on July 14, 1908, on Lake Pend Oreille, Idaho. As I recall the matter, it was in the mid-afternoon of a warm sunny day. There was not a breeze stirring. My son and I were trolling for charr from a boat, without very flattering success. I noticed a very large Golden Eagle sitting upon a pine some three hundred yards distant from the shore. The pine stood upon the top of a narrow ridge. When I first called the attention of my son to him, it was for the purpose of having the boy notice that the bird was making his toilet. He was preening his feathers and laying them down carefully. After completing his labors, he spread a pair of five-foot wings and sailed out over the water. I remarked that, if he hadn't any better luck fishing than we had had, he would do just as well to rest and not exert himself in the hot sun. He had no intention of fishing, however. When well out over the water he began to ascend in broad spirals, as though he were mounting some aërial stairway. Up, up, he went until he looked about the size of a Sparrow Hawk. After poising a minute or two in the air, he began to descend, turning over and over in the air, with wings outspread. Not doing summersaults like a Tumbler Pigeon, but sideways. When about half way to the lake, that is when he was about five hundred feet in the air, he suddenly reversed the process and turned in the opposite direction. In this manner he fell until only a few yards from the water. My son said that he "wound himself up, then had to turn in the other direction in order to unwind." My acrobat was not content with doing this stunt once, but repeated the action time and time again. In fact, he kept it up half the afternoon. All the time he was talking to himself in possibly, what seemed to him, an undertone, though it was perfectly audible even at the

great height he attained. This monologue was different from any Eagle note I had ever heard. The two notes expressed by this family have always sounded to me like *kee-kee-kee* when they are undisturbed, and a sharp *kiah-kiah* when I have been attempting to climb to their nests. This bird uttered a note that is impossible of reproduction; but it may be likened to the soliloquy of a tame Magpie when he is engaged in some particularly impish bit of mischief. There was something decidedly musical in the note, and nothing harsh, like the usual note of the raptore.

I have watched smaller birds do air-dances in the nesting season, particularly the Bobolink, but I have never seen these tricks done by the larger raptore, and especially after the nesting season was well over. Nor have I ever seen any bird go about it with such perfect gravity, and perform the action with such mathematical accuracy. I am sure that the bird turned an equal number of times in each direction.

In discussing the matter with Dr. W. T. Hornaday, he suggested that there had always to be "a first time." I wonder if that is the first time the Eagle ever did that, or am I the first person to see him do it, or has he always done it and many persons have seen him do it, and I never found it out?

Bird-Lore's Tenth Christmas Bird Census

BIRD-LORE'S annual bird census will be taken as usual on Christmas Day, or as near that date as circumstances will permit.

Reference to the February, 1901-1909 numbers of BIRD-LORE will acquaint one with the nature of the report of the day's hunt which we desire; but to those to whom none of these issues is available, we may explain that such reports should be headed by a brief statement of the character of the weather, whether clear, cloudy, rainy, etc.; whether the ground is bare or snow-covered, the direction and force of the wind, the temperature at the time of starting, the hour of starting and of returning. Then should be given in the order of the A. O. U. 'Check-List,' a list of the species seen, with exactly, or approximately, the number of *individuals* of each species recorded. A record should read, therefore, somewhat as follows:

Yonkers, N. Y. Time, 8 A. M. to 12 M. Clear, ground bare; wind west, light; temp. 38°. Herring Gull, 75. Total,—species,—individuals.—JAMES GATES.

These records will be published in the February issue of BIRD-LORE, and it is particularly requested that they be sent the editor (at the American Museum of Natural History, New York City) not later than December 28. It will save the editor much clerical labor if the model here given and the order of the A. O. U. Check-List be closely followed.

The Migration of North American Sparrows

FIRST PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by LOUIS AGASSIZ FUERTES

TREE SPARROW

This is one of the best examples of a bird that remains near its far-northern breeding-grounds in the fall until forced southward by the approach of winter. The last birds left Nome City, Alaska, September 10, 1899; Kowak River, Alaska, September 12, 1898; St. Michael, Alaska, September 21, 1899; Fort Rae, Mackenzie, October 11, 1893; North River, Prince Edward Island, average October 13, latest, October 25, 1889; Yuma, Colo., latest, November 17, 1908; Aweme, Manitoba, average of ten years, November 3, latest, November 13, 1905; Montreal, Canada, average, November 2, latest, November 7, 1889; Ottawa, Ontario, average of thirteen years, October 30, a few occasionally seen in winter; southern Maine average of nine years, November 19, and a few in winter. The northern limit of the normal winter range extends from Oregon to Colorado, southern Minnesota, southern Ontario and southern Maine, and the species winters thence to Arizona, Oklahoma and South Carolina. The following table gives the dates of arrival in the fall at the winter home. The more western records relate to the western form of this species.

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
French Creek, W. Va.....	4	November 15	October 15, 1888
Washington, D. C.....	7	November 21	October 31, 1886
Erie, Pa.....			October 26, 1889
Central New Jersey.....	5	November 1	September 30, 1905
Providence, R. I.....	5	October 31	October 7, 1906
Central Massachusetts.....	12	October 24	October 20, 1886
Southern New Hampshire.....	3	October 19	October 13, 1899
Southern Maine.....	11	October 19	September 26, 1892
Quebec, Canada.....	2	August 21	August 20, 1890
Central Missouri.....	4	November 12	November 5, 1889
Chicago, Ill.....	9	October 13	October 4, 1896
Waterloo, Ind. (near).....	4	November 4	October 15, 1887
Oberlin, O.....	6	October 25	October 21, 1907
Wauseon, O.....	5	November 7	October 19, 1892
Palmer, Mich.....			October 7, 1894
Plover Mills, Ont.....			October 1, 1890
Guelph, Ont.....			September 20, 1904
Sabula, Ia.....	7	October 20	October 8, 1892
Grinnell, Ia.....	4	October 22	October 19, 1886
North Freedom, Wis.....	4	October 16	October 10, 1903
Lanesboro, Minn.....	7	October 16	October 6, 1889
Onaga, Kans.....	15	November 1	October 19, 1901
Southeastern Nebraska.....	3	October 13	October 7, 1899
Aweme, Manitoba.....	10	September 19	September 9, 1901
Yuma, Colo.....	3	October 10	October 5, 1906
Cheyenne, Wyo.....			September 28, 1888
Terry, Mont.....	2	October 16	September 26, 1896
Okanagan Landing, B. C.....			October 23, 1905

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Southern Maine.....	18	April 4	A few winter
East Sherbrooke, Quebec.....	3	April 11	March 29, 1903
Quebec City, Canada.....	9	April 18	March 26, 1902
Central New Brunswick.....	8	April 19	April 2, 1903
North River, Prince Edward Island			May 12, 1889
Lake Mistassini, Quebec.....			May 15, 1885
Plover Mills, Ontario.....	6	March 23	March 10, 1887
Kearney, Ontario.....			March 27, 1902
Ottawa, Ontario.....	18	April 12	January 2, 1886
Palmer, Mich.....			March 21, 1894
Heron Lake, Minn.....	8	March 18	February 5, 1890
Minneapolis, Minn.....	5	March 25	January 12, 1906
Elk River, Minn.....	8	April 1	March 25, 1889
Huron, S. D.....			March 12, 1887
Harrisburg, N. D.....			March 24, 1904
Aweme, Manitoba.....	11	March 27	March 4, 1905
Yuma, Colo.....	4	March 1	February 24, 1908
Cheyenne, Wyo.....	2	Feb. 14	January 21, 1889
Big Sandy, Mont.....	2	March 16	February 24, 1907
Columbia Falls, Mont.....			March 25, 1894
Osler, Saskatchewan.....			April 6, 1893
Fort Simpson, Mackenzie.....			April 30, 1904
Lynn Canal, Alaska.....			April 28, 1882

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Washington, D. C.....	9	March 26	April 1, 1900
Morristown, N. J.....	5	April 17	April 28, 1907
Hartford, Conn.....	7	April 19	May 1, 1898
Providence, R. I.....	5	April 19	April 22, 1904
Central Massachusetts.....	15	April 17	April 26, 1896
Southern New Hampshire.....	8	April 20	April 23, 1898
Southern Maine.....	8	May 1	May 8, 1907
Quebec City, Canada.....	13	May 7	May 20, 1904
Central Missouri.....	5	April 13	April 18, 1902
Chicago, Ill.....	16	April 12	April 25, 1897
Waterloo, Ind. (near).....	10	April 13	April 18, 1891
Oberlin, O.....	12	April 26	May 3, 1903
Wauseon, O.....	9	April 16	April 25, 1888
Petersburg, Mich.....	6	April 25	April 30, 1893
Charlinch, Ont.....			May 27, 1890
Southern Ontario.....	7	April 29	May 1, 1889
Sabula, Ia.....	9	April 7	April 10, 1897
Hillsboro, Ia.....	5	April 10	April 19, 1899
Indianola, Ia.....	4	April 13	April 14, 1902
Grinnell, Ia.....	6	April 15	April 22, 1889
Madison, Wis.....	5	April 21	April 29, 1894
Lanesboro, Minn.....	7	April 25	May 6, 1893
Onaga, Kans.....	16	April 10	April 18, 1892
Southeastern Nebraska.....	6	April 13	April 20, 1890
Harrisburg, N. D.....			May 3, 1904
Aweme, Manitoba.....	9	April 28	May 19, 1897
Yuma, Colo.....			April 17, 1905
Big Sandy, Mont.....			May 9, 1907

CHIPPING SPARROW

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Raleigh, N. C.....	10	March 11	A few winter
Weaverville, N. C.....	6	March 17	March 9, 1894
Variety Mills, Va.....	21	March 22	March 10, 1901
New Market, Va.....	21	March 28	March 13, 1894
French Creek, W. Va.....	4	March 26	March 21, 1893
Waverly, W. Va.....	4	March 30	March 25, 1904
Washington, D. C.....	10	March 19	March 9, 1902
Erie, Pa.....			April 3, 1892
Morristown, N. J.....	6	April 2	March 22, 1890
Englewood, N. J.....	9	April 11	March 21, 1897
New Providence, N. J.....	11	April 13	April 8, 1892
Portland, Conn.....	7	April 12	April 5, 1892
Hartford, Conn.....	16	April 10	April 4, 1906
Jewett City, Conn.....	22	April 14	April 5, 1907
Providence, R. I.....	7	April 11	April 3, 1907
Central Massachusetts.....	23	April 15	April 4, 1903
Charlotte, Vt.....	5	April 16	April 14, 1893
Southern New Hampshire.....	5	April 21	April 15, 1898
Southwestern Maine.....	17	April 21	April 14, 1905
Plymouth, Me.....	14	April 26	April 19, 1896
Montreal, Canada.....	12	May 2	April 21, 1891
East Sherbrooke, Que.....	3	April 26	April 24, 1904
Quebec City, Canada.....	13	April 26	April 19, 1895
Scotch Lake, N. B.....	7	May 1	April 25, 1902
St. John, N. B.....	7	May 6	April 29, 1888
Pictou, N. S.....	6	May 2	April 26, 1894
North River, P. E. I.....			May 11, 1888
Helena, Ark.....	12	March 13	March 5, 1907
Athens, Tenn.....	5	March 17	March 13, 1903
Eubank, Ky.....	7	March 13	March 3, 1893
Lexington, Ky.....	3	March 17	March 15, 1903
St. Louis, Mo.....	5	March 22	March 10, 1887
Peoria, Ill.....	3	March 29	March 28, 1885
Brookville, Ind.....	6	March 18	March 10, 1888
Bloomington, Ind.....	10	March 24	March 16, 1902
Muncie, Ind.....	13	March 31	March 20, 1894
Sedan, Ind.....	14	April 4	March 23, 1889
Wauseon, O.....	10	April 2	March 25, 1886
Oberlin, O.....	13	April 3	March 23, 1903
Cleveland, O.....	13	April 3	March 20, 1894
Petersburg, Mich.....	12	April 6	April 3, 1888
Plymouth, Mich.....	10	April 8	April 3, 1893
Palmer, Mich. (near).....	4	April 27	April 25, 1899
Southern Ontario.....	21	April 14	April 7, 1896
Ottawa, Ont.....	21	April 20	April 12, 1905
Kearney, Ont. (near).....	20	May 1	April 22, 1898
Keokuk, Ia.....	10	April 2	March 30, 1896
Coralville, Ia.....	5	April 3	April 2, 1889
Sabula, Ia.....	7	April 2	March 18, 1894
Sioux City, Ia.....	3	April 11	April 9, 1905
Chicago, Ill.....	10	April 16	April 5, 1896
Milwaukee, Wis.....	7	April 18	April 10, 1886
North Freedom, Wis.....	4	April 11	April 7, 1904
Lanesboro, Minn.....	9	April 13	April 2, 1892
Minneapolis, Minn.....	10	April 18	April 14, 1889
Elk River, Minn.....	4	April 24	April 21, 1884

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
White Earth, Minn.....			May 3, 1882
Manhattan, Kans.....	8	March 23	March 8, 1894
Southeastern Nebraska.....	4	April 12	April 11, 1890
Aweme, Minn.....			May 2, 1904
Edmonton, Alberta.....			May 12, 1903
Fort Simpson, Mack.....	3	May 22	May 18, 1904
Southern Colorado.....	4	April 7	April 1, 1886
Beulah, Colo.....	5	April 25	April 11, 1906
Yuma, Colo.....	4	April 26	April 21, 1906
Cheyenne, Wyo.....			May 6, 1888
Rathdrum, Idaho.....			May 11, 1906
Terry, Mont.....	4	May 10	May 5, 1893
Columbia Falls, Mont.....	4	May 9	April 26, 1894
San Francisco, Calif. (near).....	4	April 9	March 22, 1877
Northwestern Oregon.....	4	April 14	April 12, 1904
Tacoma, Wash.....	3	April 12	April 11, 1905
Olympia, Wash.....			April 12, 1904
Spokane, Wash.....			April 15, 1907
Chilliwack, B. C.....	3	April 22	April 21, 1906

In northern Florida, where the species does not breed, the average date of the last seen in the spring is April 17, latest April 24, 1902; the last at Gainesville, Tex., May 15, 1884. When the species returns south in the fall, it appears in northern Florida, on the average, November 10, earliest, October 23, 1904; Frogmore, S. C., earliest, November 2, 1885; Bonham, Tex., average, October 20, earliest, October 14, 1885.

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Weaverville, N. C.....	2	October 28	November 4, 1894
French Creek, W. Va.....	4	October 23	November 6, 1890
Washington, D. C.....	7	November 11	December 17, 1899
Erie, Pa.....			October 27, 1888
Morristown, N. J.....	4	November 6	November 14, 1905
Hartford, Conn.....	7	October 12	October 29, 1887
Providence, R. I.....	6	October 21	November 2, 1904
Central Massachusetts.....	9	October 19	November 13, 1898
Durham, N. H.....	2	October 27	October 31, 1897
North River, Prince Edward Island..	3	October 3	October 13, 1888
Helena, Ark.....	3	October 31	November 6, 1894
Sedan, Ind.....	5	October 25	October 31, 1894
Bloomington, Ind.....			November 9, 1902
Oberlin, O.....	4	October 8	October 23, 1905
Wauseon, O.....	10	October 13	October 28, 1897
Southern Michigan.....	4	October 14	October 15, 1904
Southern Ontario.....	9	October 19	October 29, 1905
Ottawa, Ont.....	6	October 2	October 17, 1885
Grinnell, Ia.....	4	October 13	October 16, 1887
Sabula, Ia.....	6	October 10	October 25, 1893
Beaver Dam, Wis.....			October 28, 1899
Lanesboro, Minn.....	4	October 14	October 26, 1887

FALL MIGRATION, continued

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Southern Manitoba.....	3	September 18	September 23, 1903
Fort Chipewyan, Alberta			October 11, 1893
Beulah, Colo.....	5	October 21	October 28, 1903
Saguache, Colo.....			November 6, 1907
Columbia Falls, Mont.....			October 7, 1893
Saticoy, Calif.....			November 5, 1872
Okanagan Landing, B. C.....			October 6, 1905

FIELD SPARROW

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Highlands, N. C.....			March 1, 1886
French Creek, W. Va.....	3	March 16	February 26, 1890
Englewood, N. J.....	11	March 26	March 20, 1898
New Providence, N. J.....	10	April 5	March 25, 1884
Hartford, Conn.....	10	April 6	March 27, 1898
Jewett City, Conn.....	18	April 8	March 29, 1905
Taunton, Mass.....	4	April 7	March 31, 1888
Beverly, Mass.....	7	April 8	March 30, 1902
Fitchburg, Mass.....	5	April 12	April 8, 1904
Randolph, Vt.....	4	April 21	April 15, 1886
Southern New Hampshire.....	8	April 16	April 10, 1905
Franklin Falls, N. H.....	6	April 17	April 13, 1890
Lewiston, Me.....	6	April 22	April 14, 1897
Portland, Me.....	4	April 23	April 21, 1906
Eubank, Ky.....			February 13, 1891
St. Louis, Mo.....	3	March 7	February 17, 1886
Brookville, Ind.....	6	March 15	February 25, 1892
Bloomington, Ind.....	5	March 18	February 26, 1902
Waterloo, Ind. (near).....	13	April 2	March 25, 1889
Oberlin, O.....	10	March 24	March 12, 1898
Wauseon, O.....	13	April 1	March 20, 1894
Chicago, Ill.....	19	April 3	March 22, 1907
Plymouth, Mich.....	9	April 5	March 29, 1891
Detroit, Mich.....	4	April 6	April 2, 1905
Petersburg, Mich.....	12	April 9	April 1, 1894
Brant, Mich. (near).....	7	April 16	April 8, 1903
Southwestern Ontario.....	6	April 15	April 12, 1890
Toronto, Ont.....	5	April 18	April 14, 1896
Plover Mills, Ont.....	4	April 18	April 12, 1890
Keokuk, Ia.....	9	March 23	March 18, 1900
Hillsboro, Ia.....	4	March 26	March 20, 1898
Grinnell, Ia.....	6	March 30	March 24, 1889
Sabula, Ia.....	9	April 2	March 23, 1894
Lanesboro, Minn.....	10	April 9	April 1, 1888
Redwing, Minn.....			April 21, 1906
Minneapolis, Minn.....			May 7, 1898
Manhattan, Kans.....	4	March 24	March 14, 1894
Onaga, Kans.....	14	March 24	March 8, 1900
Southeastern Nebraska.....	4	April 2	March 20, 1904

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
French Creek, W. Va.....	4	November 4	November 10, 1892
Erie, Pa.....			October 26, 1900
Englewood, N. J.....	2	November 4	December 25, 1885
New Providence, N. J.....	6	October 26	November 2, 1892
Hartford, Conn.....	6	October 13	October 24, 1887
Providence, R. I.....	4	November 21	Occasional in winter
Central Massachusetts.....	7	October 23	October 31, 1889
Southwestern Maine.....	6	October 9	October 15, 1902
Lexington, Ky.....			December 25, 1904
Chicago, Ill.	4	October 4	October 20, 1906
Waterloo, Ind. (near).....	6	October 29	November 5, 1903
Oberlin, O.....	6	October 22	October 25, 1897
Wauseon, O.....	5	October 20	October 27, 1897
Southeastern Michigan.....	3	October 7	October 8, 1905
Southwestern Ontario.....	5	October 11	October 15, 1900
Beaverdam, Wis.....			October 28, 1899
Keokuk, Ia.....	5	October 27	November 15, 1902
Sabula, Ia.....	9	October 25	November 9, 1888
Grinnell, Ia.....	4	October 16	October 20, 1888
Lanesboro, Minn.....	6	October 17	October 28, 1888
Onaga, Kans.....	5	October 19	October 31, 1896

CLAY-COLORED SPARROW

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
St. Louis, Mo.....	3	May 5	April 28, 1884
St. Joseph, Mo.....	3	April 28	April 11, 1896
Urbana, Ill.....			May 5, 1905
Port Huron, Mich.....			May 2, 1901
Sabula, Ia.....	5	April 16	April 11, 1896
Sioux City, Ia.....	4	April 28	April 24, 1902
Grinnell, Ia.....			April 22, 1889
Lanesboro, Minn.....	8	May 2	April 25, 1887
Minneapolis, Minn.....	6	May 5	April 28, 1888
St. Vincent, Minn.....			May 13, 1896
San Antonio, Tex.....	3	March 21	March 20, 1891
Victoria, Tex.....			April 2, 1907
Manhattan, Kans.....	8	April 30	April 18, 1896
Onaga, Kans.....	13	April 26	April 14, 1896
Southeastern Nebraska.....	5	May 5	April 27, 1900
Vermilion, S. D.....			May 8, 1884
Grand Forks, N. D.....			May 8, 1903
Aweme, Manitoba.....	11	May 5	May 3, 1906
Qu'Appelle, Sask.....			May 9, 1904
Fort Resolution, Mack.....			June 26, 1903
Fort Lyon, Colo.....			April 25, 1886
Monon, Colo.....			May 4, 1905
Cheyenne, Wyo.....			May 17, 1888
Terry, Mont.....	2	May 17	May 16, 1905
Great Falls, Mont.....	3	May 24	May 16, 1891
Red Deer, Alberta.....	2	May 14	May 11, 1893

South of the breeding range, the average for four years of the last one seen at San Antonio, Tex., is May 12, latest, May 15, 1885; Manhattan, Kans., average of five years, May 11, latest, May 15, 1884; Onaga, Kans., average of fourteen years, May 14, latest, May 21, 1899.

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Isle Royale, Mich.....	•		August 31, 1904
Manchester, Mich.....			September 3, 1894
Sabula, Ia.....			September 26, 1894
Lanesboro, Minn.....	5	October 11	October 19, 1892
Dunbar, Neb.....			October 17, 1904
Aweme, Manitoba.....	9	September 21	September 26, 1901
Great Falls, Mont.....			September 9, 1891

BREWER'S SPARROW

Winters principally in Mexico, whence it enters the United States in early March; Los Angeles, Cal., March 2, 1900; Borega Springs, Cal., March 24, 1895; Palm Springs, Cal., March 24, 1896; Vegas Wash., Nev., March 10, 1891; Ash Meadows, Nev., March 17, 1891; Huachuca Mountains, Ariz., March 20, 1902; near Tombstone, Ariz., April 5, 1881; Coventry, Colo., April 28, 1908; Monon, Colo., April 29, 1905; Fort Lyon, Colo., April 28, 1885; Salida, Colo., May 10, 1908; Arvada, Colo., May 14, 1905; Cheyenne, Wyo., May 14, 1889; Fort Custer, Mont., May 15, 1885. It has been taken as far east as Marathon, Tex., May 12, 1901; and Cherry county, Neb., May 16, 1891. The species was still common September 25, 1906, on the Book Plateau, Colo. and the last have been noted in the Huachucas, Ariz., October 28, 1907; near Silver City, N. M., November 6, 1906; and near Garnsey, Cal., November 1, 1903. A belated bird was taken December 27, 1899, at San Fernando, Calif., and a straggler, December 15, 1873, at Watertown, Mass.

Notes on the Plumage of Sparrows

In addition to the migration records, which Professor Cooke will supply (and of the value of which it is not necessary to inform BIRD-LORE's readers), the colored Sparrow plates will be accompanied by a series of articles, by the Editor, on the plumage of the birds illustrated. These papers will treat of seasonal changes of plumage and of the diagnostic characters of the more closely related species, and should be of value as an additional aid to field identification. The first paper will appear in the next issue of BIRD-LORE and will deal with the species illustrated in both this and that number.

Notes from Field and Study

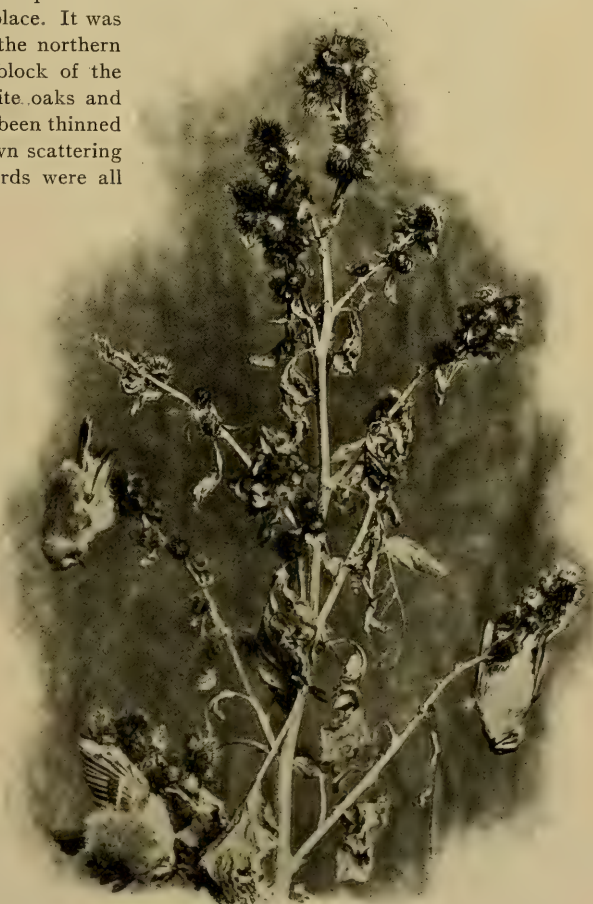
Kinglets Captured by Burdocks

On an afternoon in October, some ten years ago, a student, Mr. Floyd Hartman, came into my laboratory in Lake Forest, Illinois, and told me that he had just liberated a little bird which he had found struggling to free itself from the hooks of some ripening burdock heads, in which its feathers were hopelessly entangled. He also stated that he had noticed several other similar birds that had been unable to free themselves, and had perished. I asked him to show me the place. It was a partly wooded pasture, in the northern part of the town, within a block of the railroad. The trees were white oaks and hickories; all underbrush had been thinned out, and in its place had grown scattering clumps of burdocks. The birds were all Golden-crowned Kinglets. It was no trouble to find them. They were visible in all directions, scores of them sticking to the tops of the clumps on the most exposed clusters of heads. The struggle had ended fatally for all that I saw, and its severity was evidenced by the attitudes of their bodies and the disheveled condition of their plumage.

I examined a number of the burdock heads to determine what attraction had brought the Kinglets within range of the hooks, and found insect larvæ of two species present in considerable abundance. Most abundant were the seed-eating larvæ of an obscure little moth (*Metzgeria lapella*), but the larvæ of the well-known burdock weevil were also present in some numbers. Doubtless, it was

in attempting to get these larvæ that the Kinglets (mostly young birds) were captured.

In the few minutes that I had to spare I gathered a few clusters of burdock tops and carried them with the birds upon them into my laboratory, and made half a dozen photographs of them, from three of which the accompanying figures are reproduced. Shortly thereafter I learned that Mr. W. Hamilton Gibson had published a drawing of this same sort of fatality a good



GOLDEN-CROWNED KINGLETS IN BURDOCK



WITH WINGS HELD FAST BY BURDOCK HOOKS

many years before. So, while I have frequently loaned the negatives to ornithological friends for lantern-slide making, I have not offered them for publication. I have, however, recently used one of them for illustration of the mistakes of instinct in

my text-book of *General Biology*, and as the editor of BIRD-LORE has thought that the others would be of interest to its readers, I have gladly offered them for its columns.

—JAMES G. NEEDHAM, *Ithaca, N. Y.*



SECTIONAL VIEW OF BURDOCK BURS SHOWING LARVÆ

Note also the hooked spines

Some Interesting Reminiscences of Audubon

I perfectly recollect the world-renowned naturalist, John James Audubon, whom, as a boy, I visited at his home in what is now Audubon Park, New York. My grandmother, Sarah Hazzard, widow of Major William Wig Hazzard of South Carolina, in the Continental Army, having moved to New York, purchased the Brockholst Livingston estate of twenty acres, on the Hudson at 90th Street, where my mother, while visiting her, died, leaving me to her tender care. Another daughter, Mrs. Horace Waldo, lived with

her, under whose care I fell on the death of my grandmother. Thus it was that we became neighbors of Audubon at what is now 155th Street, New York.

Audubon, in November 1843, had returned from one of his long scientific journeys to the great West. My aunt, Mrs. Waldo, desired to visit him before he cut his hair and beard, which it was his custom to permit to grow untrimmed while on these expeditions. She took me, then nine years of age, with her. I have a perfect recollection of that visit, and can now imagine that I see him sitting in front of his home, with the genial welcome given to our party. He looked very old; his hair and beard were then longer than is represented in the frontispiece portrait of his granddaughter M. R. Audubon's history of his life; both were entirely untrimmed, the beard being very long and pointed. He was dressed in a loose blouse, apparently such as he had worn on his expeditions of wonderful research.

Close to the house was a large live animal, either a deer or an elk, while close by was a wire cage in which was a collection of large wild birds. All these riveted my youthful attention, being indelibly engraved upon my memory.

When old enough, I returned to South Carolina, living there until 1870, when I moved to New York. One of my first visits was to Trinity cemetery, to view the monument to this illustrious man."—ALEXANDER ROBERT CHISHOLM, *Late Lieut.-Colonel Confederate States Army.*

Bird Battles

It is the custom, nowadays, to speak of the English Sparrow as if he were the only quarrelsome member of the flock, while all the rest of the feathered songsters dwelt in peace and harmony; but there's many a deadly battle waged in the tree-tops in which no immigrant from over the sea has a bill. The Bluebirds and the Swallows have been carrying on a long warfare over a Martin house, and the outcry up there, followed by the expulsion of one bird, with two or three of his enemies in

close pursuit, is no unusual occurrence. Some time ago, there were always two or three Hummingbirds hovering over each bush in the flower-bed. On one of the bright feeding-grounds daily visitors were but three—a pair of birds and one lone Ruby-throat. That poor winged bachelor fared hardly at the hands of his two fellow food-seekers. The two divided their time equally between gathering insects and chasing off what they were pleased to consider the intruder on their preserves. Hardly a bite could he get, for their attentions. But he was persevering, and would fly off to a near-by tree, and, as soon as his pursuers' backs were turned, like a flash he would be back again, trying to get his bill into a flower before his rivals should see him. Recently I saw a duel between a Kingbird and a plucky young Robin, that fought as though he meant to get revenge for the many wrongs that had been perpetrated against him, and victory perched on his banner. At the end of a hard-fought battle, the Kingbird lay dead on the ground, while the Robin retired to the branches of a tree, where he spent the rest of the afternoon resting from his hard labors. Nor do these little warriors confine their valor to combats with their own kind. In an emergency they will attack an even more formidable enemy. They have been known to attack cats, and to put this dreaded foe of theirs to flight, though they are not so apt to worry this enemy as are the Swallows. The writer was recently moved to go to the rescue of the family cat, when set upon by a Barn Swallow, that was worrying the feline into a frenzy.—ROBERT PAGE LINCOLN, Minneapolis, Minn.

Are the Birds Growing Less Abundant?

Societies for the preservation of bird life have for one of their strong arguments the statement that the birds are being exterminated. In this, I feel like taking issue with them, so far as our district is concerned, though I do give them much credit for their efforts to preserve bird life.

Here, in Chester county, Pennsylvania,

where I have been a close student of bird life for forty years, there is unquestionably an increase. At the same time, some curious changes have taken place.

The Red-tailed Hawk and the Great Horned Owl, were quite abundant during the sixties. Now not more than one of each is found nesting during a season. In their place have come the Broad-winged Hawk and the Barn Owl,—both more numerous as nesting birds than the ones they displaced. These birds are both highly beneficial to the farmers, and are not subject to the merciless persecution of the earlier species; though it must be said that the Red-tailed Hawk is also classed as a beneficial bird. He was wiped out some years since, by a state law which paid a bounty of fifty cents on every Hawk or Owl killed.

In 1860, the Bluebirds and the Red-headed Woodpeckers were among our most abundant insect destroyers. Later they disappeared, victims, probably, of unfavorable weather conditions, until practically none were left. The Bluebirds have come back again, and the Red-headed Woodpeckers are also slowly gaining in numbers, though not yet as numerous as formerly.

Among new birds to spread over the country may be mentioned the cheery little Carolina Wren, an all-the-year resident, and a wonderfully fine singer. This is a southern species, but it is every year extending its range further north. The same may be said of the Cardinal. Along the Susquehanna river there are great numbers of these brilliantly colored birds, and they are also becoming much more abundant hereabout. Their cheery whistle can be heard all the winter through in the protected swamps that give them shelter.

One of our reasonably common birds that is rarely seen is the Grasshopper Sparrow. It is quite common, apparently, and several will be heard by the close observer on a day's walk, though it hides successfully in the grass fields and is very skillful in concealing its nest,—the latter being made rather late in the season, generally located on the ground.

Since Crow-Blackbirds have been put on the list of game birds, they also are disappearing. This is to be regretted, because they are not game-birds and are not fit to eat. Making an open season for them results in their being wantonly shot and then thrown away. If the farmer, when he shoots one would cut its stomach open and examine the contents, he would, in the springtime, find it filled with cut-worms and some others of the most troublesome insects that infest his fields.

The Crow is a bird that is universally persecuted, though it seems to be holding its own fairly well. It is a robber of other birds' nests in the summer time. Recently, Dr. Elinger, of West Chester, was walking near the Normal School, when he noticed two Crows flying overhead. One of them carried some object in its claws. Presently the Crow dropped it, when the second Crow swooped down and succeeded in catching it before it had had time to reach the ground. Shortly afterward the second Crow dropped it. The doctor was curious, and went over to examine what the Crows had carried. He found a young half-grown Blackbird that had evidently been stolen from a nest. It was still alive, and the doctor carried it home and placed it in a nest full of young Robins. The old Robins did not object, but the young Blackbird would not eat food, when offered by the foster parents, and died during the night. Then the Robins pitched it out of the nest.

My observations and my records show that hereabouts birds are increasing in numbers, with the exception of those shot for game. These become more numerous for a year or two, and then a cold, wet nesting season comes along and they are almost exterminated.—R. P. SHARPLES, *West Chester, Pa.*

A Horned Owl Record

After the first deep snow in December, 1902, I discovered some strange marks made by a large bird in the snow that had drifted over a stone wall. They were at first almost without meaning to me. What

bird was large enough to make such deep indentations in the snow, and what purpose could he have had in view which made such a variety of marks with feet, body, feathers and wings? After considerable study, I think I solved the problem.

A Great Horned Owl settled on the wall just over the crest of the drift at the right, making a row of small depressions in the snow with the feathers of the right wing. Turning abruptly, he made several

behind him. So I feel sure that the Owl King, *Bubo virginianus*, had been about.—
GEORGE H. SELLECK, *Exeter, N. H.*

Nesting of the Red-Cockaded Woodpecker

In the South Atlantic states the nest of the Red-cockaded Woodpecker is, so far as I have observed, always excavated in the trunk of a living pine tree. The site



A HORNE OWL RECORD
Photographed by George H. Selleck

short plunges down the sides of the drift, making two deep irregular furrows with his feet. He had heard the squeak of a mouse which he may have caught at the last plunge. Then, as he swung around and sprang up, his feathers swept the snow and his body sank deep into it. His first strong wing-beats made the spread-eagle marks at the left after he was in the air.

I searched carefully among the trees and bushes near, but could find neither pellets nor feathers to substantiate my theory. A Crow or a Blue Jay had brought a small ear of corn to an overhanging apple tree, and had dropped the cob; but neither bird was large enough to leave such marks

chosen varies from twenty-five to fifty feet from the earth. The general appearance of the nest, externally as well as internally, does not present characteristics materially different from the usual Woodpecker excavations except in one striking particular. The bird pecks numerous small holes through the bark in the neighborhood of the entrance to the nest. These are distributed entirely around the tree, and sometimes extend up the trunk for a distance of two feet or more, and often downward for a distance of six feet. From these wounds the turpentine of the tree exudes and runs down the bark, often completely covering the surface, and presenting a mark which can be seen through

the open pine forest several hundred yards. What good reason the birds may give among themselves for this strange performance I do not know, but it doubtless protects the nests from certain marauders, possible flying squirrels, which inhabit the pine lands abundantly.

There is little doubt but that, in some instances at least, the nest is occupied in successive years by the same pair of birds, and in one instance at least I have known one to be used by a pair of Red-bellied Woodpeckers.—T. GILBERT PEARSON, *Greensboro, N. C.*

A Saw-whet Owl in Central Park

On the morning of January 4, 1909, I saw a fine specimen of a Saw-whet Owl in the ramble of the park quietly sleeping in a low pine tree. I remained an hour in its society and managed by bothering it a little to get a good study of it. It was perched so low, and was so indifferent to things generally, that I could easily have taken it from the branch. It didn't altogether like my opera-glasses when I held them near, for it opened its eyes wide and followed them as I changed position, in the meantime giving me excellent views of it.

A Hermit Thrush, some White-throated Sparrows, and a crowd of English Sparrows, made things lively for a time; but, finding they made no impression on their enemy, they finally left, and let it take its sleep in peace.—ANNE A. CROLIUS, *New York City*.

The Goshawk as an Enemy of Poultry

The Goshawk is rare in this locality, appearing only once or twice during a winter. This winter (1907-08) I know of two records. In both cases the Hawk made an attack on poultry. On November 19, a farmer, living near the village, on hearing an outcry from his hens, went to the barnyard and found that they were attacked by a large Goshawk. The Hawk had killed three hens and was after a fourth when the farmer appeared. The

man went for his gun; upon his return he found that the Hawk had succeeded in killing the hen and was sitting on the stone wall eating it. The bird seemed quite tame and was easily shot.

The other Goshawk was seen by me on December 13. I was walking by a farmhouse when my attention was attracted by the loud cries of a hen. The bird was in a clump of bushes over which hovered a Goshawk. The Hawk pounced twice at the hen, but could not hit it on account of the thick branches. On seeing me, the Goshawk gave up and flew away to the woods.—EDWARD H. PERKINS, *Tilton, N. H.*

Nesting of the Chimney Swift

Spending a large part of my summer vacation of 1907 in the lake region of Minnesota, I had a good chance to observe the birds of this region. One of my experiences follows.

On July 31, while following up a stream that flowed into a near-by lake, I came across an old deserted hunting-cabin. The building was about 10 x 12 feet and had one small window and a doorway about four feet high. On entering and looking about, I saw a Chimney Swift on its nest at the farther end of the building. I walked up to the nest, which was about opposite my head, and stood looking at the bird for some time at a distance of two feet. The Swift kept its little, black, bead-like eyes fixed on me, but did not move until I reached out my hand and touched it on the back.

The nest contained four young birds, that I should say were four or five days old. When I made a squeaking noise, they raised their heads to be fed, but very soon settled down.

When I again visited the cabin, on July 19, three of the young birds had climbed out of the nest and were hanging on the log walls within a foot of their home, while the fourth was still in the nest. They were all rather uneasy, and on a close approach attempted to climb away. Neither of the old birds entered the cabin

while I was within, but I heard them overhead outside.

I rather think that two or three pairs of swifts were nesting in a large hollow stump standing on the bank of the stream, but I could not get at it to make certain.—ALBERT W. HONYWILL, JR.

Where Are the Swallows?

Have other readers of Bird-Bore noticed an unusual lack of Swallows and Swifts this season? As a rule, this part of the country is swarming with them during August and September, particularly the Tree Swallows, as these collect at night by millions among the reeds of the Hackensack and Overpeck marshes, and scatter over the surrounding country during the day. Usually an early September afternoon will show quantities in the sky, or lines upon lines of Tree Swallows on the telegraph wires, their white breasts fairly glittering in the sunlight.

This season I have seen almost no Tree Swallows, and few even of the Chimney Swifts, which are almost always plentiful. Is this probably due to a lack of insects, caused by the cool, dry summer? For, according to my observation, mosquitos have been remarkably few in this neighborhood, and even house flies have been scarce.—ISABELLA MCC. LEMMON, *Englewood, N. J.*

A Benumbed Evening Grosbeak

I noticed an account in the July-August number of Bird-Lore of a pair of benumbed Rose-breasted Grosbeaks. I had a similar experience last winter, which, however, was not with the Rose-breasted, but the Evening Grosbeak. About noon, February 24, 1909, I received a telephone call from a neighbor, asking me to send over for a bird which he had just picked up off the snow in a benumbed condition. I sent for it, and it proved to be a male Evening Grosbeak, which had by this time revived sufficiently to keep its eyes open and to make some vicious thrusts with its strong beak. An examination revealed no wounds of any kind, so we thought it might be

suffering from hunger. It refused both water and bird seed. As it continued to become a little more active, I carried it outdoors and set it at liberty. It was a minute or two before it realized it was free. Then it flew into a tree near the porch, where it rested, motionless, for an hour or so, then flew a few rods to another tree, where it rested about the same length of time. Then, when I looked out it had gone. There was considerable snow on the ground, but the day was sunny and not especially cold.

There had been small flocks of Evening Grosbeaks about all winter, and, as they are a cold-weather bird, I cannot understand how this one could have been so affected by the cold, and especially on a day much milder than many we had had.—MRS. G. F. CLAPP, *Ashland, Wis.*

Early Arrival of Evening Grosbeaks in Southern Wisconsin

The following note on the Evening Grosbeak is worth recording, as bearing on the movements of the 1908-1909 winter wave of the species. On October 27, 1908, the writer saw three Evening Grosbeaks feeding on the seeds of a box elder in Marquette, Wisconsin. This date of arrival seems earlier than usual for southern Wisconsin.—W. L. McATEE, *Biological Survey, Washington, D. C.*

Ruby-crowned Kinglet Wintering in Wisconsin

I was very much interested, in reading Notes from Field and Study in your March-April issue, to see the Ruby-crowned Kinglet reported as a winter visitor in New York and New Jersey. I saw and unquestionably identified one here in Lake Geneva on December 22, 1905.—EUGENIE C. GILLETTE, *Lake Geneva, Wis.*

Carolina Wren in Massachusetts

A Carolina Wren was found in this town by Miss Julia Laws, and was observed and identified by others also, on April 4 and 5, 1909. The bird sang freely.—ALPHEUS D. SMITH, *Bedford, Mass.*

Book News and Reviews

THE BIRDS OF WASHINGTON. By WILLIAM LEON DAWSON, assisted by JOHN HOOPER BOWLES. Seattle. The Occidental Publishing Co. 2 vols. 4to. xiv + 997 pages, 300 half-tones from photographs, 40 drawings, 12 full-page plates in color.

That one of the youngest states, ornithologically as well as politically, should have devoted to an exposition of its avifauna so elaborate and attractive a work as 'The Birds of Washington' is evidently due to the energy and courage of its authors. Eastern states whose bird-life was better known fifty years ago than that of Washington is today are still waiting for a chronicler to do for their birds what Mr. Dawson has done for those of Ohio as well as for those of Washington.

The present work treats at length of the 372 species and subspecies of birds which have been recorded from Washington, giving, under each, paragraphs uniformly headed, "Description," "Recognition Marks," "Nesting," "General Range," "Range in Washington," "Authorities" for occurrence in Washington, and "Specimens" in Washington or the Provincial Museum at Victoria. A general account of the birds' habits follow.

The book is notable for the number as well as for the excellence of its illustrations. The larger number are from photographs of birds, their nests, eggs and haunts, many of which are by the authors, and there is also a series of admirable drawings by Allan Brooks, twelve of which are beautifully reproduced as full-page plates in colors.

Mr. Brooks also supplies a list with descriptions and annotations of the twenty-five species of birds which have been found in British Columbia but are as yet unrecorded from Washington. An analytical key to all the species included has been prepared by Lynds Jones.

All in all, the 'Birds of Washington' is a notable contribution to ornithological

literature which, both because of its beauty and usefulness, should greatly stimulate the study of birds on our northwest coast. —F. M. C.

BIRD-HUNTING THROUGH WILD EUROPE
By R. B. LODGE. New York. D. Appleton & Co. 1909. 12mo. 333 pages, 124 half-tones.

As a pioneer bird photographer, Mr. Lodge has long since captured the image of those birds most accessible to the British ornithologists. With this preparation he started in pursuit of some of the rarest of European species, and the present volume is a record of their pursuit in Spain, Montenegro, Albania, Servia and Hungary.

Vultures, Eagles, Pelicans, and Egrets were chief among Mr. Lodge's *desiderata*, but many other species are also dealt with.

His account of his varied experiences, by no means relates to birds alone, but describes the countries and people visited, and, as his quest led him into truly wild portions of Europe, his book has the added interest of a narrative of travel.

That Mr. Lodge's hunt was successful is evidently due to a determination which knew not the meaning of defeat, and as a result of his courage and persistency he secured pictures of European birds which have not before been figured by the camera.—F. M. C.

THE SPORT OF BIRD STUDY. A book for young or active people. By HERBERT KEIGHTLY JOB. Connecticut edition. New York. Outing Publishing Company. xiii + 312 + iv pp. 131 half-tones.

Avoiding a formal method of treatment, Mr. Job here aims to arouse and hold the interest of "young or active people" by the adoption of a narrative form which, for the young people at least, should have the appeal of a story. Mr. Job's own enthusiasm is so unbounded that his readers cannot but share it, and the book should therefore achieve the end in view

and, at the same time, convey much information in regard to the species treated.

The photographs support the text nobly and are here far more effective than drawings could possibly be. They prove beyond question that Mr. Job practices as well as preaches. No nesting bird is beyond the reach of his camera, and in making the series of pictures illustrating this book, he has displayed a patience and persistence beyond the conception of the person who has not had some experience in similar lines. The result clearly justifies the effort. Not only has Mr. Job had the "sport" of which he writes so graphically, but he has made some of the best photographs of our commoner land-birds which we have ever seen; and while only the "young and active" may hope to emulate his success with a camera, every one who cares for birds will be interested in this splendid series of bird portraits.

The present edition of the work contains as an appendix an annotated list of the 216 species of birds which have been recorded from Litchfield county, Conn.—F. M. C.

EGYPTIAN BIRDS FOR THE MOST PART SEEN IN THE NILE VALLEY. By CHARLES WHYMPER. London, Adam and Charles Black, 1909. [New York, The Macmillan Company.] 12mo., x+221 pages, 51 full-page plates in color, 11 line cuts in tint. Price, \$6.50.

Mr. Whympers writes "for the wayfaring man who, traveling this ancient Egypt, wishes to learn something of the birds he sees." (preface.) To this end he treats serially the commoner winter birds of that portion of Egypt most frequently visited by tourists, gives a description of the plumage of each species, and devotes usually two or three pages to an account of its habits, haunts and manner of occurrence in Egypt.

Mr. Whympers writes largely from personal observation and knows his bird not only in nature, but also in the glyphs and myths of the passed civilization which renders this region so attractive to the traveler, for whom, therefore, his book possesses an especial interest.

It is, however, through his pictures that Mr. Whympers appeals most strongly. He possesses an exceptional ability to draw a bird in its haunts and do equal justice to both. In such pictures, therefore, as those of Coots at "The Sacred Lake of Karnak," Gulls on the Nile at Cairo, and other species in equally authentic if unnamed settings, he places his birds in the landscape with rare skill. The ornithologist may occasionally find reason to query certain details of form and pattern, but of the beauty and artistic excellence of these plates there can be only one opinion.

The book ends with a briefly annotated list of the 356 birds of species which have been recorded from Egypt.—F. M. C.

The Calendar of the Massachusetts Audubon Society

The Massachusetts Audubon Society as usual issues an attractive bird calendar for the ensuing year. The birds represented by colored plates are the Junco, Sora, Kingbird, Hermit Thrush, Screech Owl, and Lapland Longspur. The accompanying text is by Mr. Ralph Hoffmann. The calendar may be purchased of the secretary of the society at 234 Berkeley street, Boston.

The Ornithological Magazines

THE AUK.—This serial completes its twenty-sixth volume with the October number, 483 pages being the year's output of its indefatigable editor. While space in this publication, the official journal of the A. O. U., is primarily devoted to matters of scientific interest, there is always something to occupy the attention of those who feel that scientific ornithology is too deep for them. Surely Dr. T. S. Roberts' 'A Study of a Breeding Colony of Yellow-headed Blackbirds' in the current number is a happy combination of the scientific and the popular. The wealth of half-tones that illustrate this paper save us from the dangers of sunstroke and wet feet while we stand face to face with the Blackbirds

and their nests. We can also enjoy a pleasant account of 'A Nesting of the Blue-winged Warbler in Massachusetts,' by Mr. H. W. Wright.

'An Inquiry into the History of the Current English Names of North American Land Birds,' by Dr. S. Trotter, shows us the probable origin of many popular names. Dr. Trotter, among other things, truly says that "a respectable antiquity attaches itself to the vernacular," and in this connection it may be noted that Dr. J. A. Allen, in a recent number of 'Science,' goes even farther and advocates the use of a vernacular name in certain cases to determine the type of a genus. Thus it may even come to pass that the vernacular sword of the down-trodden amateur will be mightier than the Latin pen of the proud and haughty expert!

Mr. E. Blackwelder furnishes an annotated list of the 'Summer Birds of Iron county, Michigan,' and Mr. Sidney S. Stansell one on the 'Birds of Central Alberta.' It would be interesting to know if the Solitary Sandpiper of Alberta may not prove to be the western race, *cinnamomeus*. 'The Birds of Colorado—Third Supplement,' by Mr. W. W. Cooke, and 'The Singular Case of the Black Duck of North America,' by Dr. J. Dwight, Jr., complete the list of papers.

The usual goodly list of Notes and Reviews conclude the volume, which has twenty-eight pages of index. —J. D. J.

THE CONDOR.—Of the eight articles in the July number of 'The Condor,' all but three are devoted to nesting habits of various birds. Among the general papers the principal one is 'An Annotated List of the Birds of the Barr Lake District,' Colorado, by Hersey and Rockwell. Brief notes are given on 205 species of birds which have been observed in this region, 19 miles northeast of Denver. In a brief paper, Grinnell gives three definite records of 'The Little Brown Crane in California;' one specimen was obtained at Newport, Orange county, ten or twelve years ago, and two others were purchased in the Los Angeles market, March 21, 1904.

Under the title 'Notes on the Birds of Los Coronados Islands, Lower California,' Osburn mentions 34 species observed in the spring of 1908. Dr. T. W. Richards, U. S. N., describes the nesting of the Black-footed and Laysan Albatrosses on Midway Islands, where the breeding season begins in November; and A. M. Ingersoll describes in some detail 'The Only Known Breeding Ground of *Creciscus columniculus* (California Black Rail),' near San Diego, where three sets of eggs have been found. Mailliard presents a few notes on the 'Nest of the California Bicolored Blackbird;' Willard describes the 'Nesting of the Arizona Junco,' in the Huachuca mountains, Arizona; and Mrs. Harriet W. Myers contributes an interesting paper on the 'Nesting Habits of the Rufous-crowned Sparrow,' near Los Angeles. This last article merits especial attention as an illustration of one kind of field work which will yield valuable results without recourse to libraries or museums.

Of the six articles in the September number, three are general and three devoted to nesting habits. Gilman tells of 'Some Owls along the Gila River in Arizona,' where six species were observed in 1908 and 1909; Wetmore contributes 'Fall Notes from Eastern Kansas' on 74 species of birds found on Washington creek, near Lawrence, during the month of September in 1907 and 1908; and Sheldon adds 'Notes on Some 57 Species of Birds of Kern county.' Gilman also contributes some 'Nesting Notes on the Lucy Warbler,' made at various points along the Gila river during the last two seasons. In 'Cliff-Climbing for Prairie Falcon Eggs,' Richards describes the method of collecting a set of eggs in an almost inaccessible cliff near Littleton, Colorado. Osburn's account of 'The Nesting of the Herrmann Gull,' is of special interest as the breeding grounds of this bird along the Mexican coast have long been sought. In the spring of 1909 a colony composed of 31 pairs of breeding birds was found occupying a remote rock off the coast of Jalisco, Mexico, in latitude 18° north.—T. S. P.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

THE Twenty-seventh Annual Congress of the American Ornithologists' Union will be held at the American Museum of Natural History, December 7-9, 1909. The daily sessions from 10 A. M. to 5 P. M., with an hour and a half intermissions for luncheon, will be devoted to the reading and discussion of scientific papers. On the evening of the 7th there will be an informal reception in the bird laboratories of the Museum; on the evening of the 8th the annual dinner of the Union at the Hotel Endicott (the hotel headquarters); on the afternoon of the 9th the Union will visit the Museum of the Brooklyn Institute, and on the 10th the New York Zoological Park.

It is also proposed to charter a sea-going tug for an expedition to the vicinity of Sandy Hook to see and photograph the Gulls which congregate there.

Every real bird student in this country should be associated with the American Ornithologists' Union, not only for what he will receive from the Union, but for what he already owes to it. The present widespread interest in birds in this country is directly attributable to forces set in motion by the Union, and many persons who are now enjoying the delights of a knowledge of birds would have been without this pleasure and resource were it not for the activity of an organization to which ornithology and ornithologists are so deeply indebted. It should therefore be considered a privilege, as indeed it is, to

be affiliated with this body and we urge all American bird students who are not already associate members of the Union to present at once their application for membership in order that it may be considered at this coming meeting. It may be sent to the treasurer of the Union, Dr. J. Dwight, Jr., 134 West 71st street, New York City.

There is one phase of the Union's work which has unjustly brought it more blame than praise, but which a later generation will value at its true worth, if the present one does not. We refer to the labors of its Committee on Nomenclature and Classification, which is currently credited with all the undoubted confusion wrought by the numerous changes in the scientific names of our birds. As a matter of fact, it is not the function of this committee to make such changes, but to sit as a court of inquiry and accept such changes as are proposed only when they prove, upon investigation, to be necessary upon an unbiased application of the prevailing laws of zoölogical nomenclature.

If from the time of Linnæus a similar body had been in authority, we today should be enjoying that long-hoped-for stability in nomenclature which, thanks to the A. O. U., will be the fortunate lot of those who come after us.

A recent correspondent protests against alleged changes in the common names of our birds by the Union, but his criticism is unwarranted. It is true that in the first (1886) edition of its 'Check-List' the Union adopted certain 'book names' for several species, but the fact that they have not become current has induced it to abandon them in the forthcoming edition of the 'Check-List' and to employ those in common use.

WE note with pleasure the announcement of the formation of the Bristol County Academy of Sciences, at Taunton, Mass. A museum, laboratory, library, lectures, publications and a bureau of information are included in the plan of development. The latter is designed to place the inquirer in touch with the authority he wishes.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by MABEL OSGOOD WRIGHT

Address all communications to the Editor of the School Department, National Association of Audubon Societies, 141 Broadway, New York City

THE WINTER-FEEDING AGAIN—BOTH SIDES OF THE QUESTION

WITH the falling away of the leaves and the outlining of the pond edges with ice, the question of the winter-feeding of the birds comes to the fore. Some of us have continued the practice in a degree all summer, in order not only to keep a few of the least-wandering species in remembrance of their winter haunts, but for the gratification of our personal pleasure of the intimacy, which, if not precisely "Over the Teacups," is something akin in delightful informal sociability.

A few years ago, this matter of winter-feeding was urged as a duty toward the birds, a sort of payment for their services of song and insect destroying. Now I think that it will be agreed by those who have established a lunch counter with a more or less regular set of customers, that, like many other forms of charity, the really greatest benefit is reflex and falls upon ourselves.

As to the ways and means of feeding, it may not be amiss to rehearse them, in spite of all that has been written upon the subject.

In general, for the dweller in the open country, or upon the edge of a village with near-by fields reaching through brush lots to the real woodland, there are three classes of birds to be considered: (1) What may be termed "window-sill birds"—those like the Bluebird, Robin, Starling, Tree Sparrow, Chickadee, etc., that may be coaxed to feed almost on the window-ledge itself. (2) The tree-trunk birds, Woodpeckers, Nuthatches, the Brown Creeper, together with the Winter Wren, Kinglet, Myrtle Warbler and Jays, who, though willing to come very close to a house, still prefer to lunch on a tree counter, where they can see all about them. (3) The game birds—Ruffed Grouse and Quail, who must have either corn-stalk teepes, log hutches or carefully adjusted brush heaps, arranged to shelter themselves, as well as the food offered, if it is to benefit them. In regard to this last class of birds, let it be well understood that, whatever sort of shelter is provided to cover the ration of buckwheat or mill sweepings, it should have at least two entrances, one of these connecting with sheltering bushes, so that in case of a heavy snow, or of ice forming while the birds are in their feeding-place their means of escape will not be cut off.

In establishing either a window-sill or tree-trunk bird-counter, two things must be considered—protection from the weather while feeding and protection from cats and rodents. The window-sill stand may be easily protected from both,

but the tree-trunk will often need an inverted tin funnel fastened about it, such as is often used on the posts that support granaries. If this is not done, much food that is supposedly eaten by birds will be taken in the early morning by the rats, that have a way of going where even cats will not be tempted, while the birds that we think well fed go breakfastless.

I had such an experience with what had been a very successful counter on the top of a stone wall, which was a favorite place for the shyer birds until the rats grew too bold.

Regularity in the supply of food is the vital point after a feeding-station has been established, for after the birds have been accustomed to regular rations the lack of them will be all the greater hardship. Never go away in the hungry season without leaving the supplying of the birds' table in reliable hands. When all is running smoothly, what a zest is added to life by the waiting for and watching the hardy winter troop. Any day may bring a surprise, suddenly color will liven the harsh iron-gray branches of the apple tree, and a flock of brilliant male Purple Finches settle upon the dried currants that you had chanced to mingle with the crumbled dog biscuits.

This winter feeding is a lure not only for the birds but for ourselves—a motive for body and eye—outward and upward, and an outlet for gratitude and an inlet for cheerfulness and winter sunshine.



REDPOLL FEEDING

Photographed by Clifford H. Pangburn, at New Haven, Conn., May 6, 1907

THE MOCKINGBIRD

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 41

What the Nightingale is to Europe the Mockingbird is to the southern states,—the most wonderful song-bird of the country and the universal favorite of the people. His reputation as a musician is world-wide. Whoever hears his song is deeply impressed, and wherever the story of the birds is told the power of the Mockingbird's voice is recalled. He is one of the first in the spring to sing; indeed, I have heard him near the northern border of his range, singing with great force on a clear February morning when ice covered the trees.

In those states which border on the Gulf of Mexico, Mockingbirds sing at intervals throughout the winter months, and by March 1 are in full song. In that semi-tropical climate they abound, and in many sections are the most abundant species. I have sometimes thought that they must be conscious of the power of their numbers, from the bold defiant manner in which the music will often come from a dozen or more throats within hearing at one time, drowning in its volume the notes of all other denizens of the fields and shrubbery. The bird revels in the glory of his vocal strength, and shouts his ringing challenge to the trees, the flowers, the very sky itself. Watch the Mockingbird some spring morning, as with ruffled feathers and drooping wings he sits on the topmost bough of a neighboring tree and pours out the beautiful story of his love. At times, the very intensity of the music within his breast seems to lift him many feet in the air. With dangling legs and carelessly flopping wings, he drops again to his perch, singing the while. Anon he descends to the earth for a moment, a few rapid hops in the grass, and he bounds again into the air with scarcely an intermission in his song. Music high and low, loud and soft, hilarious and sad, with never a hesitation, never a false note, is what falls upon your ears as you hearken to this wonderful, masterful fellow, the music-prince of the southern highways and groves. However, it is at night that the Mockingbird is at his best. If he is the music-prince of the grove by day, he is the song-king of the lawn on moonlight nights, when at times his singing may be heard until dawn.

Besides his native song, the Mockingbird has the wonderful power of acquiring by practice the notes of many other birds he is accustomed to hear. He imitates the song of the Robin and the Wood Thrush, the Bluebird and the Wren. With wonderful distinctness he will give the clear whistle of the Cardinal Grosbeak. In regions where the little Sparrow Hawk is a common resident, many Mockers can reproduce its cry so perfectly as to deceive the most trained



MOCKINGBIRD

Order—PASSERES
Genus—MIMUS

Family—MIMIDÆ
Species—POLYGLOTTOS

ear. Not all Mockingbirds have equal power of imitation. The gift of mocking in different individuals seems to vary as much as the range of their natural song. An observer in South Carolina speaks of hearing one mimic the notes of no less than thirty-two birds during an interval of ten minutes.

The nest of the Mockingbird is variously situated, in small trees, brush heaps, briars, in the corners of rail-fences, in the decayed trunks of trees, on stumps, in piles of cord-wood, and at times in vines growing about the doors and verandas of southern homes. Once I found a nest between the wall and the stick-and-clay chimney of a ruined negro cabin. The nesting material consists of twigs, plant stems, dry grasses, pieces of paper, strings, strips of bark, feathers, rags, or other suitable articles which can easily be procured. The structure is generally lined with rootlets. The distance at which the nest is placed above the ground varies from three to ten feet. Rarely one may be seen elevated fifty feet in the air on the bough of a large tree.

The eggs have a pale greenish blue ground-color, and are rather heavily covered with reddish brown spots. Four is the number generally laid in a nest, sometimes five, and rarely six. The one profession of the male in spring is singing, and so completely does this engross his mind that to his mate is left the entire responsibility of constructing their habitation and hatching the eggs. May is the principal month for nesting, although I have seen Mockingbirds incubating their eggs as far north as Ocracoke Inlet, North Carolina, by April 10. In the southern part of its range two broods are reared in a season.

While engaged in incubation or caring for the young, the nest is guarded with the utmost care. The parents will not hesitate to attack any enemy, real or imaginary, which may approach their domain, be it Crow, or dog, or man. If they do not actually assail, they will at least approach near and scold soundly. Their cry of alarm at once warns other birds in the vicinity of approaching danger. If the intruder be a Hawk, the cry is taken up and passed from garden to garden by these self-appointed sentinels, and the evil news of the Hawk's approach is heralded faster than the winged desperado can fly.

If a Mockingbird's nest be destroyed, the mother-bird will, within a few days, begin building a new one. If an accident likewise befalls this, still another will be built. A pair once made their nest among the rails of a fence near my home. The owner of the fence soon afterward, while making some repairs, accidentally tore the nest from its position and the eggs were broken. The birds then built in a small tree nearby, but an animal in the pasture rubbed the tree down, and the birds were again without a home. In their search for a more secure position, the distressed Mockers sought the protection of a large orange tree, and on a large horizontal limb, ten feet from the ground, built a nest. Here more trouble awaited them, for a cat climbed the tree, despite the thorns, and ate the young in the nest. If the poor birds were discouraged by this series of disasters, they did not show it by their actions. A week after this last catastrophe I saw

**Nesting
Habits**

the female carrying twigs in among the dagger-shaped leaves of a yucca. Here, at last, she found a sure retreat, and reared her young in safety, free alike from the intrusion of man, and ox, and cat.

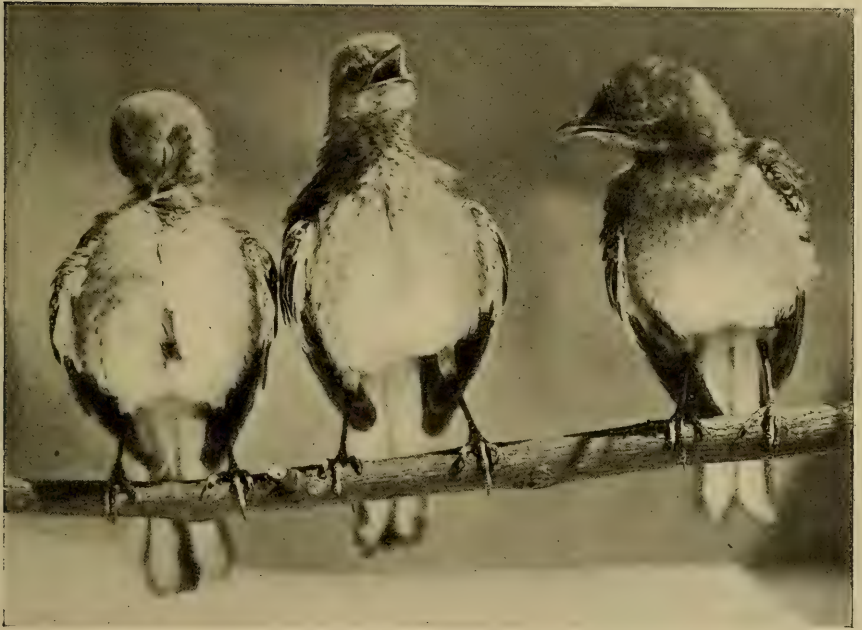
If kindly treated, this bird will oftentimes become very trustful; and, if you are so fortunate as to have trees and shrubbery about your house, he will perch in your doorway, and even hop about your room. I knew one which
In Captivity often did this, until one day a heavy hand was laid upon him and he was placed in a cage. But the moment he was imprisoned his tameness vanished. He refused all food and, dashing wildly against the cruel bars, long and untiringly sought his freedom. Outside he could hear the buzzing of a Hummingbird's wings among the woodbine on the veranda trellis. He heard, too, the twitter of Swifts as they circled and darted about the sky, and again and again the songs and calls of his fellows reached his ears, as they chased each other about the grove in their mimic combats. In his efforts to escape, he drove his bill continually between the bars of the cage until his head was bleeding from many bruises. At times he called loudly for help, and was never content a moment until his wings bore him once more into the bright sunshine; for, like most wild creatures that have grown to maturity in the free air, he could never be taught to live in captivity.

A friend of mine once picked up a young Mockingbird which had been injured, and kindly cared for it. She placed it in a cage, and fed it for a time with ripe berries and a mixture of boiled egg and potato. Later, when it was able to fly, it was given its liberty. Instead of leaving, it followed her about the house, hopping and flying along the floor. It would alight on her arm and feed from her hand. If she was out of its sight for an hour, it would become uneasy, and, entering the house by door or window, would seek her from room to room, chirping loudly in distressed tones. For many weeks the bird remained about the house and lawn, and would come when called by its mistress.

Unfortunately for their preservation, Mockingbirds, when taken while young, will, with proper care, thrive in captivity. Thousands of young are collected each year and placed in cages, and only a small per cent of these captives survive the first few months of their imprisonment. As a result of this traffic, Mockingbirds in many communities are rapidly becoming exterminated.

Although Mockingbirds are found more abundantly in the southern states, they occasionally wander much farther north in summer; some,
His Range indeed, have been known to build their nests in Illinois and New Jersey. Upon the approach of winter, these bolder spirits usually seek the South, and seldom winter north of Virginia. Now and then, for some reason, a Mockingbird declines to leave his northern summer home and, despite the snows and sleet, will remain. In the winter of 1905-6, one is known to have stayed at Rochester, New York, possibly induced in part to do so by the abundant food provided for it by Mrs. Carroll E. Brown.

While investigating the feeding habits of this remarkable bird, Dr. F. E. L. Beal found that in the fifty-two stomachs examined 29 per cent of the contents consisted of vegetable origin. Of the latter, 50 per cent was of fruit, and 21 per cent of seeds and other items. The birds' appetite for fruit and berries in some communities becomes at times so marked that many fruit growers complain of their depredations, while others plant more fruit in order to provide enough both for man and bird. This latter is the humane and economic method, and should be followed by all orchardists.



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YOUNG MOCKINGBIRDS
Photographed by A. Radclyffe Dugmore

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 141 Broadway, New York City

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Annual Meeting of the National Association

The fifth annual meeting of the National Association of Audubon Societies was held October 26, in the American Museum of Natural History, New York City.

The President reported to the members that the recommendations approved at the meeting held October 27, 1908, relative to a reduction of the Board of Directors from thirty to eleven and for amendments to Articles III, IV and V of the By-laws had been carried out. He also reported that the certificate of incorporation of the Association had been amended in accordance with the change in the con-

stitution and that the attorney for the Association had filed all necessary papers with the Secretary of State of New York in Albany.

Dr. Allen moved that Mr. William Dutcher be elected to fill the only vacancy existing in the Board of Directors; this motion was unanimously carried.

Dr. Palmer placed in nomination the names of the following persons to be members of the Advisory Board of Directors, as provided for in the amended By-laws: Col. Jos. H. Acklen, of Tennessee; Prof. H. P. Attwater, of Texas; Mr. Amos W. Butler, of Indiana; Mr. Ruthven Deane, of Illinois; Mr. William L. Finley, of Oregon; Mr. E. H. Forbush, of Massachusetts;

Mr. Ralph Hoffman, of Massachusetts; Mr. Carlton D. Howe, of Vermont; Mr. David Starr Jordan, of California; Mrs. C. Grant LaFarge, of New York; Mrs. Kingsmill Marrs, of Florida; Mr. Frank M. Miller, of Louisiana; Mr. Arthur H. Norton, of Maine; Dr. T. S. Roberts, of Minnesota; Mr. Witmer Stone, of Pennsylvania; Miss Katherine H. Stuart, of Virginia; Mr. Abbott H. Thayer, of New Hampshire; Mr. John E. Thayer, of Massachusetts; Mr. W. Scott Way, of Maryland; Mr. Wm. P. Wharton, of Massachusetts; Mr. Robert W. Williams, Jr., of Florida; Mrs. Mabel Osgood Wright, of Connecticut. They were duly elected.

The report of the Treasurer was read, together with the report of the Certified Accountant and the Auditing Committee. All of the above were ordered to be printed in the Annual Report of the Association.

The Secretary's report, together with those of Field Agents Forbush and Finley, were presented, and were also ordered printed in the annual report.

Clinton G. Abbott, B.A., gave a lecture entitled "Half Holidays with the Birds." Mr. Abbott's talk was received with great enthusiasm by the members present, who appreciated the splendid slides presented. The pictures and talk both were a strong argument in favor of the camera over the gun, as an aid to bird study.

On the adjournment of the meeting of the Association, a meeting of the Board of Directors was held, when the following officers were elected for the ensuing year: William Dutcher, President; Theodore S. Palmer, First Vice-President; Dr. J. A. Allen, Second Vice-President; T. Gilbert Pearson, Secretary; Jonathan Dwight, Jr., Treasurer.

Mr. Samuel T. Carter, Jr., of New York City, was reappointed counsel for the ensuing year.

The President was directed to reëngage all of the field staff of the Association, together with as many or all of the special wardens as should be found necessary during the breeding season of 1910.

The President recommended that a suitable certificate should be prepared

by the Association, to be given to patrons and life-members, and also to such persons whom the Board of Directors consider to have performed extraordinary and meritorious work for bird protection.

It was ordered that the recommendation be referred to a Committee of two, to prepare designs for a certificate or medal, or both, and present the same with their report at the next meeting of the Board. The following Committee was appointed: Dr. H. C. Bumpus, Mr. Frank M. Chapman.

The counsel of the Association notified the Board that certain mortgages held as a part of the endowment fund would soon fall due, and that some of them undoubtedly would be paid to the Association.

Dr. Bumpus offered the following resolution:

Resolved: That, in case any mortgages held by the Association may be paid off from time to time, the monies so realized must be reinvested in bonds secured by first mortgages on improved real estate within the City of New York, and that the President, Treasurer and Counsel of the Association be, and they hereby are appointed a Committee to arrange for such investments, with the express understanding that no mortgage loan shall be made in a larger amount than two-thirds of the appraised value of any property; such appraisal to be made by any one of the following parties:

Official appraisers of Title Guarantee and Trust Company; Official appraisers of Lawyers Title Insurance and Trust Company; Douglas Robinson, Charles S. Brown & Co.; Horace S. Ely & Co.

The above motion was unanimously carried.

It was suggested by Dr. Palmer that the Association should in a systematic way provide wardens employed by this organization with suitable bird books and other literature, in order that they may learn the proper names and true value of the birds they are protecting, and also that they may be able to impart such knowledge to the public among whom they work, when occasion demands.



ONE FAMILY READY FOR INSTRUCTION ABOUT BIRDS. THE BEST WORK OF THE NATIONAL ASSOCIATION IS

Fifth Annual Report of the National Association of Audubon Societies, 1909

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ADDRESS OF THE PRESIDENT

ANNUAL MEETING 1909

EDUCATION AS A FACTOR IN AUDUBON WORK.— RELATION OF BIRDS TO MAN

MEMBERS OF THE NATIONAL ASSOCIATION: In our address to you at the meeting held a year since, we gave a brief foreword on education as related to the work of this Association. This year we will endeavor to elaborate this important subject, for it doubtless is the most powerful factor we are using, and is the surest road to success.

To educate is to impart knowledge, to develop by mental and moral training, to cultivate and qualify by instruction for the business and duties of life. Thomas Jefferson said, "Educate and inform the whole mass of the people, enable them to see that it is their interest to preserve peace and order, and they will preserve them."

It is the chief function of this Association to educate the whole mass of our fellow citizens regarding the value of wild birds, and the intimate relation that

exists between them and agriculture. If we can devise some means of imparting such knowledge to the whole mass of the people, we will most surely show them that it is to their interest to preserve birds; and, when we have succeeded in doing this, the result desired—the preservation of birds—will surely follow.

That the present knowledge of this important economic subject is lamentably deficient is a self-evident fact which is shown in many ways.

Present Lack of Knowledge Among a great many people, chiefly agriculturists, there still exists a deep-seated prejudice against Hawks and Owls, which are now known to be of the very highest value. In a recent government publication, Dr. Fisher says, "The sooner farmers, ranchmen, horticulturists and nurserymen learn that the great majority of birds of prey are their friends and deserve protection, the sooner will depredations by noxious rodents and insects diminish."

Unfortunately, this knowledge is still largely in the hands of a restricted class of persons who have made a scientific study of the habits of such birds, and until it is widely diffused among the public it is of little value. It is our duty to see that this knowledge is given to the people; when it is, prejudice will be supplanted by protection to the inestimable benefit of agriculture. It is also shown by the mass of contradictory bird laws now upon the statute books of the Commonwealths of the country. Local and selfish interests are the basis of many of the existing laws. The beneficial laws that have been secured in the past decade are largely the result of the small measure of education that has been imparted by this Association, and its allies, the scientists in the United States, who are slowly but surely collecting and arranging facts and data of the utmost value. When this information has been imparted to the public, we hope, by this Association, the people will voice their wishes to legislators; and, as a result, laws will be enacted that will be national in their far-reaching effect, replacing statutes which cover only restricted districts. Only ignorance and selfish local interests permit entirely contradictory bird laws to control in areas separated only by an imaginary line, or laws that permit the traffic by a restricted class of persons in assets that belong to the whole people. Nor will it be possible for a legislative body to be so controlled by partisan political influences that it defeats measures introduced for the benefit of a Commonwealth.

The conservation of the natural resources of the country is one of the subjects that is now beginning to engage the attention of the public, and among its several divisions one of the most important is the careful and frugal use of its wild life. The vast importance of this movement is just beginning to be realized. It is a fact not to the credit of the public that the present generation is selfishly wasteful of the natural wealth of the country. The original owners of the land, we are told in "Purchas Pilgrimage," were taught to husband the earth and the trees. Today wild life is wasted to the point of extermination, in some instances; and within the lifetime of many of the members of this Association, several species of birds have become

Importance of Such Knowledge

extinct in North America. Had the educational work we are now commencing been started before the middle of the last century, these races of birds might have been saved.

To help us realize the importance of the conservation of wild life, let us for a moment consider the interests involved. No one can deny that the foundation of the wealth of this country is its agriculture and forestry. In just the measure that these industries are hindered is the wealth of the country diminished. The last census (1900) gives the number of farms in the United States as 5,739,657, with an acreage of 841,201,506. Every acre harbors swarms of insect and rodent pests that destroy crops, entailing enormous losses, amounting to over one billion dollars yearly. When we consider these figures, should we not realize the importance of educating the masses to the inter-relation between wild life, and especially of wild birds, to agriculture and forestry? It is vitally necessary that every agriculturist should know intimately the value of each species of birds, and just what its function is in the work of suppressing insect and rodent pests. When the tillers of the soil have learned these facts as well as they now understand the value of fertilizers, the rotation of crops, and the use of labor-saving devices, the work of the husbandman will be repaid far better than it now is, and much of the annual loss of one billion of dollars will be saved. You may say that you are not engaged in agriculture, and consequently are not interested in, or called upon to help in, this educational work; but we most emphatically say that you are directly and vitally interested. No matter what your daily vocation is,—a banker, manufacturer or tradesman,—you are primarily dependent on the success of agriculture. When the crops are good, trade in all its many ramifications is flourishing; and, on the contrary, when the crops fail, there is an immediate curtailing of trade, and we hear the well-known cry of “hard times.” It has almost become axiomatic; successful agriculture equals general prosperity. You see that you have an interest in advancing agriculture, and consequently should be willing to bear your part in our educational plans.

This leads us to the important question of what knowledge should be imparted to the public about birds. This can only be considered very briefly at this time; its elaboration is a part of the plan proposed by the Association. We wish to instruct regarding the value of birds. Now, this value consists in the amount of noxious insect and rodent life destroyed by birds while seeking food; therefore it is important that every one should have at least a general knowledge of the food habits of birds. These facts cannot be accurately discovered by the individual, but must be looked for by persons specially qualified for research work. It is the province of this Association and a part of its plan to secure such data, and after arranging it in the simplest and most easily assimilated form, to give it to the masses. A tree has many enemies, which, if left to work unchecked, would kill it in a very short time. We need to show the owner of the tree just what birds feed on the insects that are sapping its life. Every part of the tree has one or more varieties

**What
Knowledge to
Be Imparted**



A LAD WHOSE EDUCATION HAS BEEN IN WRONG CHANNELS. HIS TROPHIES REPRESENT A SERIOUS

of birds that glean the major part of their food from the enemies of the tree. The same condition obtains on the ground, in the air, and on the water, —all have their bird-workers, who have well been called "policemen of the air."

Nature study is engaging more and more the attention of the public, and it is an elementary part of the work of this Association to encourage the study of bird life, especially in its relation to mankind, or at least in its bearing on agriculture and forestry. Many of the teachers of the country in the rural schools are expected to be able to give some sort of instruction on nature subjects. At least one state, Illinois, has recently passed a law which went into effect as late as June of the present year, two of the sections of which are as follows:

Section II. "In every public school within this state, not less than one-half hour of each week, during the whole of each term of school, shall be devoted to teaching the pupils thereof kindness and justice to, and humane treatment and protection of, birds and animals, and the important part they fulfil in the economy of nature. It shall be optional with each teacher whether it shall be a consecutive half-hour or a few minutes daily, or whether such teaching shall be through humane reading, daily incidents, stories, personal example, or in connection with nature story.

Section V. "The principal or teacher of each public school shall state briefly in each of his or her monthly reports whether the provisions of this Act have been complied with in the school under his or her control. No teacher who knowingly violates any provision of Sections I, II or III of this Act shall be entitled to receive more than 95 per cent of the public school moneys that would otherwise be due for services for the month in which such provisions shall be violated."

The object of the Act above quoted is to raise the standard of good citizenship. Undoubtedly, the desired result will be secured if the teacher is prepared to intelligently carry out the full requirements of the Act; but it seems premature to require a teacher to impart knowledge that he or she does not possess, and it is an injustice to exact such a heavy penalty as 5 per cent of the salary of the teacher for failure to give to scholars what they never received themselves.

There are nearly six million farms in the United States, which means that at least that number of adult males are engaged in agriculture. It is too late to undertake to give them a thorough training about the value of wild birds. This knowledge should have been given them as a part of their common-school training. However, it is not too late even now to make them fairly familiar with this important subject. Through the medium of the printing-press and the widely extended rural free delivery, educational bird literature may be disseminated to the greatest advantage. In addition, men and women fully equipped as lecturers can be sent into the rural districts and, with the aid of the stereopticon and colored slides of birds, plants and insects can instruct in an entertaining manner hosts of farmers and their wives. Such valuable work entirely changes the viewpoint of the hearers; as soon

How to
Impart
Knowledge

To Adults

as they learn of the value of birds they commence to show an active interest in their preservation. This is one of the educational plans of this Association.

A prominent bird student and writer recently said, "The main hope for adequate bird protection lies in educating the children up to a proper realization of the importance of birds to humanity." With this statement and idea we are in the most hearty and complete accord; in fact, we believe it to be the best and surest solution of the problem that we are



CORMORANTS

Note artistic effect developed by the photographer. A striking illustration of the advantages of the camera over the gun. Photographed by P. B. Philipp

now struggling with. When we have given the eighteen millions of school children of this country a comprehensive knowledge of birds in their relation to man, our great problem will be satisfactorily solved. Children are our hope for the future. Through them we shall be able to secure far better results than by any other method of work. They should be taught about birds and nature from the kindergarten to the university. Every aspect of the relation of birds to mankind should be embraced in the curriculum, especially the economic. Having grounded them in this phase of the subject, the esthetic value will naturally make itself known to the student. A large porportion of the school children of today will be the agriculturists of the near future, and some of them will be the law-makers. Can

any one doubt that the children who are trained in the manner above outlined will be the best type of citizens? An intimate knowledge of birds leads to kindness and consideration of their rights as fellow citizens; this leads to the adoption of the golden rule as the guide to all other affairs in life. Francis Bacon in his essay, "Of Custome and Education," says "Mens Deeds are after as they have beene *Accustomed*. Therefore, since Custome is the Principale Magistrate of Mans life; Let Men by all Meanes endeavour, to obtaine good *Customes*. Certainly.



CORMORANT BREEDING COLONY

Photographed by P. B. Philipp

Custome is most perfect, when it beginneth in Young Yeares: This we call *Education*; which is, in effect, but an *Early Custome*."

What was true three centuries ago is equally true today. This Association must spend a large part of its energy in teaching children the good custom of protecting birds and animals.

As it is manifestly impossible for us to reach the individual scholar, the knowledge we wish to spread must be imparted through the medium of school-teachers.

However, before teachers can instruct, they must be taught themselves. To that end, it is the hope and aim of this Association to establish a great school or university devoted solely to the work of fitting teachers to be instructors about birds in their relation to man. That

By Teachers

such a school is necessary there can be no question, and until one is established our work with the school children of the country will necessarily make slow progress. This Association now has an endowment that enables it to carry on its legislative work for ideal bird laws; and also for the material increase of wild bird and animal refuges, which must always be guarded by special wardens, but our present fund is not large enough to carry on the educational work with the breadth and force its importance demands. This branch of our work must be carried on intensively, and to that end we must seek for a proper educational endowment, the minimum sum of which should be one million dollars. Such sums are given every year for objects no more worthy or important than that carried on by this Association. If we can save for the public by our efforts only 1 per cent of the annual loss to agriculture, it will amount to ten million dollars,—ten times the sum we modestly ask as an educational endowment. Further, we will do what is far more important than mere money-saving, we will train children to be kind and gentle to birds and animals, without which trait of character they cannot become citizens of the highest type. From their ranks must come the men and women with high ideals who will carry on our work after we have laid down our arms. I cannot better conclude than with these grand words of Wordsworth:

“Wisdom and Spirit of the Universe!
 Thou Soul, that art the Eternity of thought!
 And givest to forms and images a breath
 And everlasting motion! not in vain,
 By day or starlight, thus from my first dawn
 Of childhood didst thou intertwine for me
 The passions that build up our human soul
 Not with the mean and vulgar works of man,
 But with high objects, with enduring things,
 With life and nature; purifying thus
 The elements of feeling and of thought,
 And sanctifying by such discipline
 Both pain and fear,—until we recognize
 A grandeur in the beatings of the heart.”



YOUNG ROYAL TERN

ANNUAL REPORT OF SECRETARY

The past year of Audubon work has been marked by some of the fiercest struggles we have ever encountered with the enemies of bird and game protection. During the years when our legislative activities were devoted largely to securing the enactment of laws for the protection of the non-game birds, our chief enemy was simple indifference to the importance of bird preservation on the part of people generally. In only a few instances did active opposition have to be overcome. However, since the work of the Association has grown to include the field



WILSON'S PLOVER

A game bird too small to make it available for food; it should be removed to the non-game bird class. Photographed by P. B. Philipp

of game bird and animal protection, a formidable array of market men, market hunters and bird dealers have been encountered. Furthermore, with the establishment of state game commissions, supported by hunters' license fees, large sums of money have been gathered in the game-protection funds in many states, which has attracted the attention and drawn the interest of politicians, whose desire, in some instances at least, has been to aid their political friends rather than the cause of game protection. Again, new laws, which if left undisturbed would eventually prove to be wise ones, often appear to conflict with the interests of people, and, before a fair trial can be given, attempts are prematurely made to repeal them.

A still further source of opposition has been the large millinery interests, which, from a business standpoint, naturally resent the attempts of the Association to strengthen the non-game bird laws of the country by prohibiting the sale of the plumage of all wild birds.

As a result of these various causes for opposition, the advancement of the legislative work of this Association, although executed with all the vigor within our power, does not of late show the apparent progress noticeable in previous years.

While the Audubon societies are by no means responsible for all the advancement made in bird and game protection in this country, their influence is without doubt the most pronounced factor for the cause which is in operation today. Wherever the interests of the birds are threatened, the Audubon workers appear, and a close watch is kept upon all proposed bird legislation of whatever character. In many instances the Association initiates legislation, often preceding the same by extensive campaigns.

The following is a partial trial balance, showing legislative gains and losses in the United States during the past year:

GAINS

California.—Amending and strengthening the "Model Law." Establishment of Bird Day.
 North Carolina.—A number of local Game laws.
 North Dakota.—Enactment of the "Model Law" (exception permitting sale of cage birds).
 Oklahoma.—Enactment of the "Model Law."
 Idaho.—Protection accorded blackbirds.
 Montana.—Doves protected throughout the year.
 Nebraska.—Doves protected throughout the year.
 Massachusetts.—Spring shooting prohibited.
 North Dakota.—Spring shooting prohibited.

LOSSES

Illinois.—Protection removed from all Hawks.
 New Mexico.—Protection removed from Road Runners.
 North Carolina.—Jurisdiction of Audubon wardens restricted to forty-four out of ninety-eight counties.
 Oklahoma.—Doves left without any close season.
 Pennsylvania.—Loons and Grebes classed as game birds and given an open season. Protection removed from Shrikes, Eagles, Buzzards, Ospreys, Cranes, Herons, Bitterns.
 Utah.—Protection removed from Blackbirds, Blue Herons, Bitterns, Squaks, Magpies, Kingfishers.
 West Virginia.—Protection removed from all Hawks, Owls, Eagles, Crows and Kingfishers.
 Indiana.—Spring shooting extended two weeks.
 Nevada.—Spring shooting extended two weeks.
 Oregon.—Spring shooting extended two weeks.
 Nebraska.—Spring shooting extended three weeks.
 Idaho.—Shooting permitted in January and February.
 Washington.—Spring shooting of shore birds along the coast permitted in January, February and March.

Detailed reports of the more important legislative fights which have been waged during the year have appeared from time to time in the columns of "BIRD-LORE," hence it is scarcely necessary to deal with them fully in this annual

summary. It may be well, however, to call attention to the fact that some of our most notable gains have been in the New England states, where the educational campaign has been longer waged than elsewhere. The results in that territory serve to emphasize most strongly the tremendous importance of distributing literature, using the press, and maintaining strong, intelligent field agents.

EDUCATIONAL EFFORT

During the year, our regular educational and special leaflets have been issued to the number of 155,000. In addition, there have been published 2,000 annual reports, 10,000 copies of the president's address, 1,000 supplemental leaflets for the booklet "How to Attract and Protect Wild Birds," 30,500 letters and circulars in the interests of New York legislation for the session of 1908-9, and 19,000 for the legislative season of 1909-10; 1,000 post-cards for the New Jersey legislation, and 500 post-cards for the Virginia legislation. Thus making a grand total of 216,000 separate documents issued by the Association. Besides this, the general correspondence of the New York office has been unusually heavy. Syndicate articles have been issued to the public press regularly, as heretofore, and detailed information was furnished to a number of persons engaged in the preparation of magazine articles. It has been possible for the officers and field agents to accept only a small per cent of the invitations which have been received asking for bird lectures. The demand for public talks of this character is growing annually.

FEDERAL BIRD RESERVATIONS AND WARDENS

To this Association is largely due the credit of interesting President Roosevelt in establishing the fifty-three National Bird Reservations now in existence in this country. Until July 1 of the present year, this Association had borne the entire expense of employing the warden force which guarded them. Since that date, the salaries of the wardens have in part been paid by the government. The following is a complete list of the bird reservations established up to date:

List of Reservations Made by President Roosevelt, Together with the Dates of the Several Executive Orders

- March 14, 1903.....Pelican Island Reservation. Pelican Island in Indian River, Florida.
- October 4, 1904.....Breton Island Reservation. Breton Island, Old Harbor and Free Mason Islands, Louisiana.
- March 9, 1905.....Stump Lake Reservation. Stump Lake in North Dakota.
- October 10, 1905.....Siskiwi Islands Reservation. Unsurveyed islands of the Siskiwi group on the south side of Isle Royal in Lake Superior, Michigan.
- October 10, 1905.....Huron Islands Reservation. Unsurveyed islands of the Huron Islands group, Lake Superior, Michigan.
- October 10, 1905.....Passage Key Reservation. An island near the mouth of Tampa Bay, Florida.

- February 10, 1906....Indian Key Reservation. An island in Tampa Bay, Florida.
- August 8, 1907.....Tern Islands Reservation. All the small islets commonly called mud lumps in or near the mouths of the Mississippi River, Louisiana.
- August 17, 1907.....Shell Keys Reservation. Unsurveyed islets in the Gulf of Mexico about three and one-half miles south of Marsh Island, Louisiana.
- October 14, 1907....Three Arch Rocks Reservation. Unsurveyed islands known as Three Arch Rocks in the Pacific Ocean off the coast of Oregon.
- October 23, 1907....Flattery Rocks Reservation. Islands lying off the coast of Washington.
- October 23, 1907....Copalis Rock Reservation. Islands lying off the coast of the State of Washington in the Pacific Ocean.
- October 23, 1907....Quillayute Needles Reservation. Islands lying off the coast of Washington in the Pacific Ocean.
- December 7, 1907 ..East Timbalier Island Reservation. Small marshy islands commonly known as East Timbalier Island in the Gulf of Mexico, south of Louisiana.
- February 24, 1908....Mosquito Inlet Reservation. Small mangrove and salt grass islets, shoals, sand-bars and sand-spits in and near the mouths of the Halifax and Hillsboro Rivers, Florida.
- April 6, 1908Tortugas Keys Reservation. Group known as Dry Tortugas in the Gulf of Mexico, South Florida.
- August 8, 1908..Key West Reservation. Keys and islands of the Florida Keys group near Key West, Florida.
- August 8, 1908.....Klamath Lake Reservation. Islands situated in Lower Klamath Lake and the marsh and swamp lands unsuitable for agricultural purposes in Townships thirty-nine, forty and forty-one south, Oregon, and in Townships forty-seven and forty-eight north, California.
- August 18, 1908.....Lake Malheur Reservation. Shore lines of Lakes Malheur and Harney and the streams and waters connecting these lakes, Oregon.
- August 28, 1908.....Chase Lake Reservation. Public lands about Chase Lake North Dakota.
- September 15, 1908...Pine Island Reservation. Bird Island and Middle Island in Pine Island Sound on the West Coast of Florida.
- September 26, 1908...Matlacha Pass Reservation. Three small islands located in Matlacha Pass, West Coast of Florida.
- September 26, 1908...Palma Sola Reservation. Small unsurveyed island in Palma Bay, Florida.
- October 23, 1908....Island Bay Reservation. Unsurveyed mangrove and other islands in Township forty-two south, West Coast of Florida.
- October 26, 1908....Loch-Katrine Reservation. Lands about reservoir site in Oregon Basin, Wyoming.
- January 26, 1909....Pelican Island Reservation. Enlarged to include several other adjacent islands.
- February 3, 1909....Hawaiian Islands Reservation. Islets and reefs situated in the Pacific Ocean, near the western extension of the Hawaiian archipelago.
- February 25, 1909....Salt River Reservation. Parts of Townships four and five north, Gila and Salt River Meridian, Arizona.
- February 25, 1909....East Park Reservation. Parts of Townships seventeen and eighteen north in California.
- February 25, 1909....Deer Flat Reservation. Embracing parts of Townships two and three, Boise Meridian, Idaho.

- February 25, 1909....Willow Creek Reservation. Embracing part of Township twenty-one, Montana Meridian, Montana.
- February 25, 1909....Carlsbad Reservation. Embracing two reservoir sites along Pecos River in Townships eighteen, nineteen, twenty and twenty-one south, New Mexico.
- February 25, 1909....Rio Grande Reservation. Embracing parts of Townships seven, eight, nine, ten, eleven, twelve and thirteen south, Principal Meridian, New Mexico.
- February 25, 1909....Cold Springs Reservation. Embracing parts of Townships four and five north Willamette Meridian, Oregon.
- February 25, 1909....Belle Fourche Reservation. Embracing parts of Townships eight, nine and ten north, Black Hills Meridian, South Dakota.
- February 25, 1909....Strawberry Valley Reservation. Embracing parts of Townships three and four south, Uinta Meridian, Utah.
- February 25, 1909....Keechelus Reservation. Embracing parts of Townships twenty-one and twenty-two north, Willamette Meridian, Washington.
- February 25, 1909....Kachess Reservation. Embracing Kachess Lakes reservoir site, Washington.
- February 25, 1909....Clealum Reservation. Embracing parts of Townships twenty, twenty-one and twenty-two north, Willamette Meridian, Washington.
- February 25, 1909....Bumping Lake Reservation. Embracing the Bumping Lake Reservoir Site, Washington.
- February 25, 1909....Conconully Reservation. Embracing part of Township thirty-five north, Willamette Meridian, Washington.
- February 25, 1909....Pathfinder Reservation. Embracing parts of Townships twenty-six, twenty-seven, twenty-eight, twenty-nine and thirty north Wyoming.
- February 25, 1909....Shoshone Reservation. Embracing part of Township fifty-two north, Wyoming.
- February 25, 1909....Minidoka Reservation. Embracing parts of Townships eight and nine south, Boise Meridian, Idaho.
- February 27, 1909....Tuxedni Reservation. Embracing Chisik Island and Egg Island entrance to Tuxedni Harbor in Cook Inlet, Alaska.
- February 27, 1909....Saint Lazaria Reservation. Embracing the Island of Saint Lazaria, entrance to Sitka Sound, Alaska.
- February 27, 1909....Yukon Delta Reservation. Embracing all the treeless tundra of the delta of the Yukon River west of longitude one hundred and sixty-two degrees and twenty minutes west from Greenwich and South of the Yukon River, Alaska.
- February 27, 1909....Culebra Reservation. Embracing the islands of the Culebra group, Porto Rico, excepting Culebra island, which is a naval and light-house reservation.
- February 27, 1909....Farallon Reservation. Embracing the Middle and North Farallon islands and other rocks northwest of the same, located on the coast of California near San Francisco.
- April 2, 1909.....President Taft extended Mosquito Inlet Reservation from Township fifteen south, range thirty-three to cover all unsurveyed and unappropriated mangrove and salt-grass islets, shoals, sand-bars and sand-spits in the south half of Township fifteen south, range thirty-three, in Townships sixteen south, ranges thirty-three and thirty-four and in Township seventeen south, range thirty-four, all east of the Tallahassee Meridian, Florida.

In guarding the more important reservations and bird colonies during the past year, the Association has employed forty-four wardens, who are required

in their Annual Reports to submit a list of the birds whose breeding-grounds they have guarded, and also to give as nearly as possible an accurate account of the number of young raised in the colonies during the summer. Their reports of the number of young raised are necessarily far from accurate, but it is believed the correct number lies somewhere between 200,000 and 400,000, the greater number of these being Puffins, Murres, Gulls, Terns, Petrels, Rails and Herons.

EXECUTIVE AND FINANCIAL

The general office of the Association is maintained, as hitherto, at No. 141 Broadway, New York City. An office force of five persons has been employed regularly, and additional service has frequently been necessary. Four field agents have been employed to give a portion of their time to campaign activities. These were Mr. E. H. Forbush in New England, Mr. W. L. Finley, on the Pacific coast, Capt. M. B. Davis, in Texas, Miss Mary T. Moore in the Carolinas, Miss Gretchen L. Libby in California, and the Secretary in the South Atlantic and Gulf states. Miss Katharine Stuart, School Secretary of the Virginia Audubon Society, has also engaged at times in work for the Association. There is great need for at least two additional field agents at once, one of these to be located in the Middle West and one in the southwestern part of the Union. In fact, our work will not reach the stage of greatest proficiency until that good day comes when a field agent can be employed in every state to give his entire time to the work.

The hearty coöperation of the members of the Board of Directors is every year increasing tremendously the efficiency and power of the Audubon Work, which in the years to come will, in America, wield an untold influence for good.

The membership and financial support of the National Association continue to grow steadily. The sustaining members now number 1,140 and the life members 87. This represents a gain during the year of 158 of the former and 21 of the latter. We are pleased also to announce the name of our first patron, Mr. Wm. P. Wharton of Groton, Mass. It is necessary to engage in a constant and persistent canvas for new members in order to even keep the total membership normal, as throughout the year there are necessarily many deaths and losses of membership from other unavoidable causes. We need greatly an additional one thousand members during the coming year. If each person who is now a member would interest one friend also in joining the Association, this end could be accomplished.

It has been utterly impossible to meet a large per centage of the import-demands made upon us during the year, which would require the expenditure of funds. The field, however, has been covered as fully as possible, selecting always those lines of effort where the demands seemed strongest, and where there appeared the greatest promises for definite and far-reaching results. Much valuable time and interest has been given by the Treasurer, Dr. Jonathan Dwight, Jr., to the financial aspects of the Association's interests. During the year, a

profound loss has been sustained in the death of one of the members of the Advisory Board of Directors, Mr. Wm. H. Fisher of Cincinnati, who was also president of the Ohio Audubon Society. Another warden was murdered on November 20, 1908. This was Columbus G. McLeod, on duty in Charlotte Harbor, Florida.

SECRETARY'S WORK

During the past six years the Secretary has lectured and performed other campaign work in nine of the southern states, as well as many of those in the North and Central West. While thus engaged, he has sought as far as possible to form the acquaintance of Ornithologists, Game Commissioners, officers of game protective organizations, members of Congress, and others who might become interested in the work of this Association and lend it their aid and sympathy. One result of this policy has been the gradual formation of a wide circle of correspondents, which now requires much attention.

The past year, in addition to attending to the duties of the southern office, your Secretary has spent considerable time in the field on enterprises of a diversified character. In the interests of the work he has given many public talks. Among these were the State Audubon Society at Richmond, Virginia, the Virginia State Educational Conference at Newport News, and Hampton Institute at Hampton.

As retiring president of the North Carolina Academy of Science, he gave the annual address at Trinity College. Three night lectures were given before the 2,000 teachers gathered at the Summer School of the South at the University of Tennessee. He spoke at San Antonio, at the University of Texas at Austin, and before a joint gathering of the Legislature of Arkansas. He addressed legislative committees in North Carolina, and spoke before the Indiana Nature Study Society at "Buzzard's Roost" near Indianapolis, as well as at several schools and colleges in North Carolina and Virginia.

He has visited and held personal conferences with the officers of the Audubon Societies of Ohio, Indiana, Illinois, Virginia, Texas and Wisconsin, and has corresponded much with the officers of several other states.

He drew state game protective bills, to be introduced in the legislatures of Florida, Georgia and Arkansas, and wrote many letters to people in these states soliciting their support for the proposed legislation. He also visited Congress in the interests of national bird legislation.

After consultation with other members of the committee, he prepared and forwarded to Mr. Gifford Pinchot our first preliminary report on the subject of Bird and Game Protection in America, and outlined an extensive plan of investigation, of which Mr. Pinchot approved. In behalf of this movement and the protection of our migratory birds in winter, he visited Mexico City and held a personal conference with President Diaz. The President expressed himself as interested in the proposition to form an organization for wild-bird and animal

protection in Mexico, and named his son, Proferio Diaz, Hijo, as the proper person to head the movement. President Diaz also volunteered to aid in gathering information in the Republic for our Committee on Conservation.

Thus briefly I have endeavored to outline the work of the National Association and its officers the past year. The detailed reports of the various state societies have been received, and will be included when this appears in printed form for distribution.—T. GILBERT PEARSON, *Secretary*.



WILSON'S PLOVER. SHADING EGGS FROM THE SUN

Photographed by P. B. Philipp

REPORT OF FIELD AGENTS

REPORT OF EDWARD HOWE EORBUSCH

In attempting to review the efforts put forth to advance the cause of bird protection in New England during the past year, your agent can merely report upon the work itself and its immediate results. How far the educational work done will extend its influence into the years to come can only be conjectured.

LEGISLATION

The greater part of the work done has been legislative. This work has continued for ten months out of the twelve, beginning in Vermont in November, 1908, and ending in Connecticut in August, 1909.

Every Legislature in New England was in session during the season of 1908-09, and a great mass of legislation adverse to bird protection was introduced into the different assemblies. Seventy-five bills regarding the protection of birds and mammals were presented to the General Assembly of Connecticut. Thirty were introduced into the Great and General Court of Massachusetts, and the numbers brought before the Legislatures of Maine, New Hampshire and Vermont were considerable. Only three bills were introduced in Rhode Island, and these were all calculated to secure better protection; but they were all fought at every stage, and only one was passed.

Your agent was disabled by an accident in September, 1908; but, shortly after the Annual Meeting of the National Association, he was able to go to Montpelier and attend the sessions of the Legislature there during the latter months of the year. A bill was passed protecting "Upland Plover" at all times until August, 1915, and Quail until August, 1911. A bill to allow the killing of Cedar Birds was defeated in the Senate. Several other bad bills were killed in Committee.

Attempts were made by hunters in all the states to secure the passage of bills for the payment of bounties on birds and mammals, including lynx, porcupine, beaver, mink, weasel, fox, owls, hawks, crows, and other birds and mammals. Ten bills relating to bounties were introduced in Connecticut alone. All these bounty bills were killed in all the states, except a bounty on the bay lynx, which is now in force in Vermont. It was shown before the Committees that the payment of bounties for the destruction of many species of mammals and birds would encourage irresponsible hunters to be abroad at all times of the year, and would make extremely difficult the enforcement of all game laws.

Bills regarding the establishment of reserves and sanctuaries for birds and game were passed in Massachusetts and Connecticut, and bills were also passed

in Massachusetts, Vermont and New Hampshire, giving the Governor the right to issue proclamations to stop all shooting and declare a close season, when hunters in the woods are likely to cause forest fires during dry weather.

Bills establishing a system of registration for resident hunters were enacted in Rhode Island, New Hampshire and Vermont, and attempts to repeal or nullify such laws were defeated in Massachusetts.

Bills forbidding the spring shooting of wild-fowl and shore-birds were enacted in Massachusetts, and a strong attempt to repeal a similar law in Connecticut was defeated. All the states of New England, except Rhode Island, now prohibit the spring shooting of wild-fowl, but there are one or two unimportant exceptions made to this rule in Maine and New Hampshire. This year the Maine Legislature passed an act establishing an open season on the "Golden-eye or Whistler" in Hancock county from November 1 to April 1. All such exceptions to the general laws abolishing spring shooting should be and must be repealed. Spring shooting in New England is now very nearly abolished, so far as legislative enactments can prevent it. It must be the task of the future to close the gaps in this legislation as fast as possible, and to influence public sentiment in favor of the enforcement of these laws.

The laws that have been enacted for the prohibition of spring shooting and for the registration of hunters could not have succeeded without the coöperation of the best sportsmen of New England, who have worked unsparingly for the passage of these bills.

There have been the usual efforts to abolish or change the game commissions in the New England states, but none of these attempts have been successful.

The increase of deer throughout New England is a matter for serious consideration. In many localities they are regarded as a nuisance by the farmers. The rapid multiplication of these animals shows the possibilities of protection by statute. Most of the natural enemies of the deer having been killed, they have increased tremendously in those New England states where they have been protected at all times, and even a short open season, such as is allowed now in Vermont and New Hampshire, has not greatly decreased their numbers; while in Maine, with a longer open season and much hunting, they are holding their own very well.

Acts prohibiting hunting from power-beats, such as one passed in Connecticut this year, are now in force in most of the New England states. Shooting wild-fowl from sail-beats, which is prohibited in some states, should be forbidden in all.

Certain acts that were introduced for the purpose of securing statistics of the amount of game taken were defeated, as were also most of the bills limiting the number of birds to be taken in a day. Many sportsmen still oppose such legislation.

There seems to be no disposition now in New England to repeal the laws for the protection of song and insectivorous birds, but in some states the laws regarding the use of birds for millinery ornaments need strengthening.

Connecticut has followed the lead of Massachusetts in establishing the office of State Ornithologist. A law passed during the last session of the legislature places the office under the control of the Connecticut Agricultural College.

Your agent made a trip to Washington during the winter, as Chairman of the National Association Committee for the Protection of Birds, which coöperates with the National Conservation Commission. At this time he attended the North American Conservation Conference, for the purpose of requesting the Mexican delegates to take up the question of the protection of migratory birds, etc., in Mexican territory. This the chairman of the delegation agreed to do, with Dr. T. S. Palmer, our Vice-President, and we hope to see better bird legislation in Mexico.

BIRD RESERVATIONS

The important problem of providing refuges for birds is now being taken up by the state authorities in New England. Connecticut this year passed a law giving its Fish and Game Commissioners greater freedom in regard to game preserves. Massachusetts has made all public lands bird and game reservations by legislative enactment. This will include not only the thousands of acres now in public parks, forest parks and public grounds, but also the forest lands coming into the control of the State Forester under the laws enacted last year.

Game reserves are being set aside also by private enterprise. Some of these are maintained for the benefit of the owners, but others are intended for the benefit of the public. Within the year, a large reservation of thousands of acres has been obtained by an Association in Plymouth county, Massachusetts, for the purpose of propagating game, birds and fish. Other undertakings of a similar character are purposed by the Fish and Game Commissions of other states, or by organizations for the protection of birds and game.

In July, your agent visited for a few days the bird reservations in Duke's county, Massachusetts. Here the Fish and Game Commissioners of the state have now more than 2,000 acres under their control. The Pinnated Grouse, or Heath Hen, has nearly doubled in numbers there since the work of protecting them on this tract was begun two years ago. The birds were seriously threatened by fire, in the nesting season; but the fire was stopped near the boundaries of the reservation, and did very little, if any, injury to the birds. Broods of young birds have been seen, and the probability is that there will be a good increase there this year. Dr. Field, Chairman of the Commission, however, believes that there is an excess of male birds among the adults, and this, if true, will tend to check the increase.

The colonies of Least Terns, on which a report was made last year, seem to be holding their own on Martha's Vineyard; and, from all the reports received, the Common and Roseate Terns and Laughing Gulls breeding on the islands off the southeastern coast of Massachusetts are doing well. During this trip, an example of the value of protecting wild-fowl in spring was seen. A gentleman



LEAST TERN AND YOUNG ON PROTECTED TERRITORY IN MASSACHUSETTS

who has control of the greater part of a large pond allows no shooting there during the spring, although he shoots some there during the fall. Early in August, fully seventy-five Black Ducks were seen around this pond, most of which were raised in the marshes bordering it.

During a little more than two weeks spent in Maine, in an attempt to interest some of the summer residents in the work of the National Association, your agent found the different species of Gulls and Terns, which are protected there, very numerous along the Maine coast.

EDUCATIONAL WORK

During the holidays of 1908, an exhibit was made by the National Association and the Massachusetts Audubon Society at the Boston Sportsmen's Show. This attracted a great deal of attention, interested many sportsmen in our work, and was the means of somewhat increasing the membership of both Associations. This exhibit lasted two weeks.

The greater part of the educational work for the year has been conducted by means of forty lectures given since the first of January by your agent. More than the usual proportion of the lectures has been given before Farmers' Organizations, Agricultural Societies, Horticultural Societies and Pomona and Subordinate Granges of the Patrons of Husbandry. The intelligent farmers of New England are fully awake to the importance of the protection of birds, and the demand for lecturers on birds at Grange meetings is very great. Much influence for better bird legislation is now brought to bear by farmers' organizations. The audiences at these lectures have been large, as a rule, and a great deal of interest has been manifested, particularly among teachers and students. The demand for lectures continues unabated; and to meet this demand, in Massachusetts alone, would require the entire time of one man.

The correspondence of your agent in New England has increased enormously, and the acquaintance with people interested in the protection of birds is constantly widening. The results in every respect are encouraging, except that not enough financial support is forthcoming, as yet, to carry out the missionary work that is so much needed in the schools of this region. A very large immigration of foreigners of the bird-killing class is continually coming into this territory, and work among them and their children is urgently needed.

A series of newspaper articles, begun in 1908 and published in the press of New England, has been continued during the past year.

REPORT OF WILLIAM L. FINLEY

During the past year, the Audubon Societies on the Pacific coast have accomplished good work in the cause of bird protection. In Oregon, the law against selling aigrettes and the plumage of other native birds is now strictly enforced. Last April, ten of the leading milliners of Portland were arrested for selling

aigrettes. All of the people arrested pleaded guilty and paid their fines. This resulted in the countermanding of large orders for fall aigrettes, and at present no plumage of Herons, Grebes, Terns and other native birds is sold by the milliners in this state.

In the state of Washington, the same law will be strictly enforced after January 1, 1910. At a meeting of the leading milliners that was held in Seattle, they agreed, if given until the first of January, not only to cease handling any plumage of native birds, but also to stop using the plumage of the birds of Paradise; and they further agreed to assist, in any way possible, in preventing others from violating this state law.

At the session of the California legislature held last spring, an amended law for the protection of wild birds was passed, and went into effect on June 17. This law is stronger than those of Oregon or Washington, because it prohibits the sale of all plumaged native birds, irrespective of whether the birds have been captured within or without the state.

With the enforcement of our bird laws in Washington, Oregon and California, we can hereafter prohibit the sale of the plumage of Herons, Grebes, Pelicans, Terns, Gulls, Ibis and other native birds, so many of which have been killed up and down the Pacific coast.

The action of the Washington Legislature last spring in setting aside Lake Washington and prohibiting the killing of birds on that body of water or within one mile of the shore, has made a splendid bird reserve in a portion of the country that is being rapidly settled.

The establishment of the two large reserves, Klamath and Malheur Lake Reservations, in southern Oregon and northern California, has already proven a great benefit in wild-bird protection on the coast. Up to the time of the establishment of these reserves, the non-game birds had no protection from plume hunters. White Herons were slaughtered almost beyond recovery. Many of the Grebe and Tern colonies were annihilated. Very little was done in the enforcement of game laws throughout this part of the country. During the present year, however, things have changed, and birds have received careful protection by the employment of a good warden in charge of each of these reservations. To meet this expense, the Oregon Audubon Society raised a fund of \$300, the National Association has contributed liberally, and the Audubon Society of California has also started a fund to help in this work. The state game officials of Oregon and California have given assistance, and aided materially in securing the better enforcement of laws.

As the Klamath Lake Reservation lies partly in Oregon and partly in California, and as this is such a rich field for the plume hunter in summer and the market hunter in winter, it has been a very difficult matter to secure bird protection in this region because of the difference in state game laws. Now the situation is entirely changed. The warden in charge, Mr. L. Alva Lewis, of Klamath Falls, has his appointment from the Department of Agriculture. He is

also an authorized game-warden both of California and Oregon. With the patrol boat "Grebe" furnished him by the National Association, Mr. Lewis has done most effective work. His recent arrest of the Mayor of Merrill, a small town between Lower Klamath and Tule Lakes, and three other prominent citizens, for shooting Ducks out of season has had a good effect throughout that part of the country, for there has been considerable more respect paid to game laws.

Warden Claud Hibbard, who is in charge of the Malheur Lake Reservation, has been working in conjunction with the residents through that part of the country, and has secured good protection for all the birds on the reserve. Mr. Hibbard writes, "I believe we have accomplished a great deal by gaining the sympathy and coöperation of the residents about the lake. I believe that next season the residents almost to a man will be helping in every way they can to preserve the birds and enforce the law."

The sentiment for bird protection all through the Northwest is continually growing stronger. In certain fruit-growing sections, there has been some complaint against birds for destroying fruit; but this has been only against one or two species in particular. Professor F. E. L. Beal, of the Biological Survey, has recently visited the fruit-growing sections in Washington and Oregon, and says that, almost without exception, the farmers and fruit-growers understand thoroughly the economic value of wild birds. As a general rule, they express regret that there are not more song birds. Professor Beal's work during the coming year through the orchard-growing sections of the Pacific Northwest will furnish us scientific data that are needed in relation to birds and the fruit-growing industry.

At the last meeting of the Oregon Conservation Association, complaint was made by timbermen in some sections of the state because insects were causing the destruction of pine and fir timber. As our wild birds are the natural check against these insect pests, efforts will be made to get better bird protection in order to save the forests. A campaign of education will be carried on in this line.

Legislation during the past year on the Pacific coast has been very favorable for Audubon work. There has been no backward movement. A number of minor changes have been made in game laws. In Oregon, all the old game laws were repealed and an entirely new code adopted. Besides shortening the seasons and reducing the bag limit on game-birds, we were fortunate in securing the passage of laws closing the season entirely for elk, mountain sheep, antelope, does and spotted fawn. Laws were also passed giving protection to Doves, Wild Pigeons, and all shore- and wading-birds. Another law of considerable importance prevents the burning or setting fire to Tules, during the spring and summer, where Ducks, Geese and other water-birds are accustomed to nest.

No change was made in the Model Law in Washington or Oregon, but in California it was made stricter. Besides this, a law was enacted establishing March 7 as Bird and Arbor Day, to be observed by all public schools and edu-

cational institutions, not as a holiday, but by including in the school work suitable exercises that will give instruction concerning the economic value of birds and trees, and promote a spirit of protection for them.

During the past year, I have delivered illustrated lectures on wild-bird protection under the auspices of the Audubon Societies of Detroit, Cincinnati, Indianapolis, Chicago, Madison, St. Paul, Fargo and Grand Forks. In the state of Washington, I have given eight lectures, some of which were under the auspices of teachers' institutes. In Oregon, I have lectured at various times and places throughout the year.

I represented the National Association at the Seventeenth National Irrigation Congress, which was held at Spokane, Washington, August 9-14. This is an organization of great importance in the West, and is composed of a large class of practical men. I gave a talk on "The Value of Wild Birds to Forest and Field." Considerable interest was aroused in bird protection, and strong resolutions were passed endorsing the work of the Audubon Societies.

As representative of the National Association, I also attended the First National Conservation Congress held at Seattle, August 26-28. I gave an illustrated lecture on "The Conservation of Wild Birds." This is an organization that is sure to lend great help toward preserving all our natural resources, and the saving of our wild birds and animals is a very important feature in the work.

STATE AUDUBON REPORTS

The reports of the State Audubon Societies show a marked progress in bird-protection work, and will well repay a careful reading by the members of the National Association and the other readers of BIRD-LORE.

Alabama.—Few states in the Nation, and no state in the South, have made such progress in recent years in matters relating to game and bird preservation as has Alabama.

Prior to the enactment in 1907 of the law creating the Department of Game and Fish, and establishing uniform laws throughout the state for the protection of birds and game, but little attention was paid to the local game laws that applied to the various counties. These statutes were openly and notoriously violated by practically every one, and no effort was made to institute prosecution against game-law infractors.

Recognizing the fact that no law is automatic, and that, in order to secure its enforcement, it must be entrusted to some specially constituted service, or else it will remain a mere nullity on the statute books, the legislature established a most efficient game warden service for Alabama, that has vigilantly and rigidly enforced the game and bird laws of this state.

Public sentiment is strongly favorable to game and bird protection. Birds and game are considered as among the most valuable of the state's natural resources, and every effort is being made, not only to save this asset from annihilation, but to increase every species that dwell or temporarily sojourn within our borders.

Vandalism has been largely reduced and the farmers' rights have been protected, by taking the guns out of the hands of the shiftless and roving class that patrol the state, and, under the pretense of hunting, commit many petty offenses.

The bag limit on game birds has had a very fine effect in restraining the reckless hands of game destructionists that formerly masqueraded under the guise of sportsmen. Under the law, pheasants and all imported birds are protected until December 1, 1912. This provision has served to induce the importation of a large number of pheasants by gentlemen who are interested in the propagation of game birds.

Formerly, it was the custom to scatter wheat or other provender on fields, for the purpose of attracting Doves in large numbers. This practice served to collect practically all the Doves within a radius of fifty miles. At an appointed time, hunters in great numbers would repair by daybreak to the baited field, and the rapid discharge of firearms could be likened unto the raging of a mighty battle. As many as six thousand Doves have been bagged in one field in Alabama in a single morning. Probably one-fourth more were fatally shot, being

so badly wounded that they were enabled to fly but a short way, only to die. The baiting of fields is but a relic of barbarism, and no surer method is conceivable by which Doves can be speedily exterminated than the pernicious practice of baiting fields. This custom has been stopped in Alabama, and Doves have rapidly increased.

Reports from every section of the state indicate the fact that squirrel and deer are rapidly multiplying. In many places where deer have not been seen for years they are now fairly abundant, and squirrels are found in practically every woodland. The provision of the law making it a violation to offer game for sale has served the excellent purpose of disbanding the great army of murderous pot hunters that formerly combed the state, eager to slaughter every species of wild life that could be sighted. Formerly, the fronts of our market were strung with game, birds and animals, which stood out as a nauseating sight to those who knew the practices resorted to in bringing so much game to bag. No game or birds is now being sold in Alabama, except here and there in isolated cases.

Formerly, thousands of Quails were trapped and shipped to foreign markets. Those who engaged in this practice had emissaries in practically every section of the state, who would capture the birds and ship them to headquarters, from whence they were expressed out of the state. Many packages of dead game were likewise expressed from Alabama, all of which has been stopped.

Wild Turkey and Wood Duck, two of our most valuable game birds, that were formerly nearing the point of extinction in Alabama, are now frequently seen in large flocks in practically every section of the state.

The Commissioner of the Department of Game and Fish prevailed upon the State Superintendent of Education to set aside the 4th of May, the anniversary of the birth of Audubon, as Bird Day in Alabama. At the request of Mr. Gunnels, the State Game and Fish Commissioner prepares annually a Bird Day Book, which consists of a suitable program of recitations and declamations. The institution of Bird Day has been most valuable in inculcating into youthful minds a higher appreciation of song birds, and of educating them to a comprehensive idea of their economic value.

As a reciprocal obligation which is due by us to those who reside in the North, migratory birds should be protected by the Southern states. Were it not for the fact that during the nesting and breeding season these birds are protected, it would not be long before there would be no birds to migrate during the autumn and winter seasons to this section. Birds know no state lines, and, in so far as the preservation and protection of those that belong to the migratory family is concerned, it is a national and not a state question.

A few of our citizens have objected to the protection of Robins. These birds nest to the North in orchards and in the immediate vicinity of the homes of citizens; they are much loved on account of their friendliness to man, and because of their sweet songs during the spring. Formerly, Robins were slaughtered by millions in the South, and oftentimes were fed to hogs. The sensation of horror

that must have been felt by the people whose sweetest song-bird is the Robin would be much akin to that which we would experience if our Mockingbirds, the Southland's sacred songster, should migrate to Cuba and be butchered, as Robins formerly were in Alabama.

Under the hunters' license system, more than fifteen thousand dollars annually is paid into the game and fish protection fund, which is largely in excess of the expense of the Department of Game and Fish. Although game wardens are at all times on the lookout for violators of the law, yet, when infractions are reported to the Department of Game and Fish, the Commissioner at once orders game wardens to the scene of infractions, and every effort is made to apprehend and to convict breakers of the game law.

Public sentiment demands the conviction of those who transgress the bird and game laws, hence hundreds of convictions are had each year in Alabama. Every activity is demonstrated by the Department of Game and Fish, in keeping constantly before the people the provisions and the benefits of the law relative to game and bird preservation, for only by these means can the sympathy of our citizens be enlisted, and their coöperation had, in the matter of protecting the wild life of the state.—JOHN H. WALLACE, JR., *State Game and Fish Commissioner*.

Arizona.—The Arizona Audubon Society was organized April, 1908, with a small but active membership. After making a program for the following year's work, the Society adjourned for the summer, to begin the following October. While the apparent result of the first year's work to a non-interested party has not been so great, yet the enthusiasm of the members and good words spoken for the Society by outsiders are very encouraging. Several meetings were held during the year, when Educational Leaflets were distributed; also bird life about Tucson was studied. Hundreds of Tucson school children were told of their feathered friends. It is hoped that the organization of a Junior Society will be part of the coming year's labor.—MRS. HARRIETT B. THORNER, *Secretary*.

California.—Though a number of distressing cases of bird destruction have been reported during the year, on the whole, it would seem that the bird-lovers have no reason to be disheartened. Public sentiment is on the increase in favor of bird protection.

At the recent legislative session, our Society made a vigorous and successful fight against the passage of two especially undesirable bills; one intended to remove protection from the Meadowlark, and the other to permit children under fourteen years of age to hunt without a license. One of the interesting incidents connected with the defeat of the Meadowlark Bill was the statement of Senator Curtin that his young son, aged only nine years, had written him that he did not want his father to come home unless he could say that he had voted to save the Meadowlark. This boy had collected and forwarded to his father reliable

data concerning the food habits of this bird, which the Senator used in its defence.

The amended non-game bird bill prepared by the Society passed both branches of the legislature with practically no opposition, received the approval of the Governor, and is now in effect. It is a great improvement over the old law, making, as it does, illegal goods of all plumes and skins of birds native or migrant in California, whether taken in or out of the state. It also defines "game" birds more closely, restricts the collection of eggs and skins for alleged scientific purposes, and otherwise strengthens the old law in several essential features. Hundreds of circular letters were sent out to milliners throughout the state, notifying them of the change in the law, and that it would be enforced by the Audubon Society. As far as I know, no effort is being made by these milliners to evade the law, many of them being glad of the opportunity given them to cease carrying aigrette plumes and skins, obtained in such an inhumane way.

An important change in the game law, and one for which our Society has long worked, was giving the Mountain Quail a closed season for a period of years.

By means of the Humane Education Committee of the California Club of San Francisco, a law was enacted making March 7, of each year (the anniversary of the birth of Luther Burbank), Bird and Arbor Day, and directing that all public schools observe this day, not as a holiday, but by including in the school work suitable exercises and instruction of the value of birds and trees, and the promotion of the spirit of protection toward them.

About the middle of the year, Miss Gretchen L. Libby, of Riverside, was appointed as School Secretary to take charge of the school work. So successful was she in creating an interest among teachers and pupils that the Directors voted to engage her entire time for the year beginning October 1, 1909. She will have at her disposal the Society's lantern and colored bird-slides to illustrate her lectures. Much good is expected to come from this educational campaign.

The greatest calamity that has befallen the Society at any time is the removal from the state of its beloved and efficient Secretary W. Scott Way. He it was who started the Audubon movement in California and placed it on a firm footing. The new Secretary and the Board of Directors, because of their interest in the work and their regard for its founder, are determined that it shall continue, and to that end are putting forth every effort for a successful year.—MRS. HARRIETT W. MYERS, *Secretary*.

Connecticut.—The work of the Connecticut Audubon Society has continued mostly along educational lines during the past year. We have added six new libraries of books for the Public Library Committees' traveling libraries, and twenty-five sets of bird charts.

Our libraries, charts and portfolios have been sent out between three and four hundred times.

We have distributed Educational Leaflets of the National Association, and

have taken interest in the doings of the Connecticut legislature in regard to the passage of bills for the protection of birds. The Executive Committee has held nine meetings in the year, with an average attendance of twelve members.—HELEN W. GLOVER, *Secretary*.

Delaware.—I was away from home when your letter came, and, as I could not answer until after the date mentioned, I simply let it be. Here in Delaware we continue to try to increase our membership, especially among children, and also try to see that our bird laws are obeyed. I hear constantly of the interest and care exhibited in the birds by the children of the rural schools. This I take to be a very good sign. Certainly, we see a greater number of birds than we used to a few years ago, and I do not personally recollect having seen a Delaware woman with an aigrette on her hat this year. I'm sorry my report is late and that it is short, but what there is to it is to the good.—FLORENCE B. HILLES, *Secretary*.

District of Columbia.—Since our last report we have had several very interesting lectures and our Annual Bird Class and Field Meetings. The latter have become exceedingly popular; so many people attending the walks that at times it has been really difficult to study the birds. We feel that next year we shall have to limit the attendance in some way, possibly having one or two meetings for the general public and restricting the others to members of our Society.

Hitherto, our efforts have been to interest all whom we could reach in the work of the Society, but this year we felt that they might appreciate more something for which they made some return. Following that line, we decided to charge twenty-five cents for thirty-two of the Educational Leaflets published by the National Society, and we have had a much greater demand for the Leaflets than when we gave them away. We have also published, for free distribution, several Leaflets, edited by Mr. Henry Oldys, of the United States Biological Survey, on "Current Items of Interest," which have been much appreciated.

Both our Senior and Junior membership seem to be having a natural and healthy growth.—HELEN P. CHILDS, *Secretary*.

Florida.—The year has been one of success, both by increasing membership and interest; we congratulate ourselves that so much has been accomplished with a few active workers and a limited income; we are nevertheless confronted with the fact that we are powerless for great good without the support of the state. We need improved legislation, as well as the rigid enforcement of now-existing laws.

Leaflets, circulars, educational matter, bulletins from the Agricultural Department in Washington, and from Massachusetts, have been widely distributed. Charts, pictures, outline drawings have been furnished to schools, and prizes given for excellence of work or composition. The Press of the state and the Southern Express Company have given us helpful service.

We have active Auxiliary Committees at Port Orange and Bradentown. "The Housekeepers Club" (100 members), at Cocoanut Grove, made "Bird Day" of especial interest. Mrs. Kirk Munroe reports that bird protection is receiving much attention, and good work is being done among the Women's Clubs in the state; "The Rangers," her club of boys, are constantly doing protective work. Some two hundred and fifty women belonging to the "Federation of Florida Women's Clubs" have signed a pledge sent out by the Florida Audubon Society, modeled after that of the National Association, agreeing not to wear aigrettes or bird plumage, the ostrich being excepted.

The Robert Hungerford Industrial and Normal School (colored) has made bird study a part of the year's course. We have a second school of colored children at Cocoanut Grove, where teachers and scholars are doing fruitful work. Prizes of books have been given to schools in Orlando and Maitland, but this all represents individual interests, for we are unable to obtain the support of the State Board of Education.

There has been no new "reservation" during 1909; but, on recommendation of Mr. Dutcher and by order of President Taft, "Mosquito Inlet Reservation" has been extended some four or five miles in a much-needed direction. As the result of Warden Pacetti's vigilance, there has been a noticeable increase of aquatic bird life. Reports are frequent of the sale by Indians, in and about Miami, of aigrettes and bird plumage. The officers of this Society have appealed to those in authority to stop this trade, but without success, for every winter the Indians bring their boats down the rivers from the interior, laden with plumes and feathers obtained during the spring and summer. This business flourishes, for women can buy aigrettes and feathers much cheaper here than from milliners in the North. A most serious blow was given to all efforts for protecting the Egret by the recent decision at Washington, countermanding the order of Collector Loeb that certain confiscated aigrettes should be burnt. The decision to have them sold at public auction puts them directly into the hands of the dealers, who will now, with the plume-hunters, exult in their success. We have read that Ruskin says somewhere, "If woman decided that there should be no more war, war would cease to be." We are not sure that such power can be claimed for the sex, but, if it is true, then it goes without saying that, if woman decided the aigrette was not to be worn, the aigrette would not be for sale; for the one appalling fact stands forth that woman, and woman alone, will ever be held responsible for the ultimate extinction of the Egret.

The publications this year include an illustrated Leaflet on "The Bob-white," by Dr. C. F. Hodge, giving its great value as an insectivorous bird and the possibilities of its domestication; an illustrated Leaflet by the Rev. Herbert K. Job, "Shall we protect the Pelican," showing that the bird in no way prevents man's obtaining a supply of fish food (both Leaflets are of such importance they should be read by all interested in bird protection); a Leaflet for clubs, societies and schools, with suggestions for "Bird and Arbor Day;" a most inter-

esting and valuable Leaflet by President Wm. F. Blackman of Rollins College, Winter Park, "The Economic Value of Birds to the Farmer and Fruit-Grower," giving important statistics regarding the destruction of weed-seeds and insects,—this Leaflet is the synopsis of a paper read by Dr. Blackman before the Horticultural Society of Florida at Daytona, May 19, 1909. A set of four picture post-cards has been issued, two with illustrations and text on the aigrette, the others on the Pelican and Bobwhite.

Under the auspices of the Florida Audubon Society, some twenty lectures, illustrated with lantern slides, were given in various towns on the east coast, and in Central Florida, by the Rev. Herbert K. Job, with the most gratifying results.

A garden party in the interest of the Society was given by the President, Mr. Dommerich, at Maitland, which gave to a large company many practical suggestions for the welfare and protection of birds, while walking through the groves, "hammocks" and gardens of his estate.

Each year, the great need of a Game Commissioner is felt. There should be a revision of all license laws in regard to birds and their eggs. A gun license should be imposed on the resident as well as the non-resident of the state. Protection from private and amateur collectors and tradesmen is needed, calling for a change in licenses given for "scientific purposes," for the law, as it now stands, quite defeats the object of this Society, hundreds of birds and their eggs being lost every year. It is suggested that all licenses for "scientific purposes" should be issued under the seal of the Department of Agriculture at Washington, where properly attested application for such license shall be sent by the Commissioner of Agriculture from the state where the application is made. The amount of the bond should be made protective, and a heavy penalty attached for any evasion of the law.—MRS. KINGSMILL MARRS, *Chairman of Executive Committee of Florida Audubon Society*.

Illinois.—This report, as far as statistics are concerned, covers the time from May, 1908 to May, 1909. During that period nearly eleven thousand Leaflets were distributed. "By-the-Wayside" has been sent each month (free) to 100 teachers in the state; the five sets of mounted pictures, the lecture and the four libraries have gone about doing good work; about two thousand children and forty adults have joined the Society, and hundreds of letters have been received and written. The money receipts have been \$396.39, and the expenditures \$377.18. At we started into the year with a balance of \$297.93, May 1, 1909, found us with the sum of \$317.14 to begin our new year. A sketch of Audubon's life, with picture, by Mr. E. B. Clark, has been issued as a Leaflet; a program for Arbor and Bird Day was prepared by Mrs. E. C. Adams, at the request of the Chicago Outdoor League. The Leaflet on the "Study of Birds," by Mrs. Alice Hall Walter, has been reprinted, with a number of additions. A new lecture written by Mr. J. L. DeVine and the pictures furnished by Mr. Frank Woodruff have

been added to our plant, and we have begun a work we hope to extend largely in the future; that is, we have already placed loosely bound portfolios of Leaflets and pictures in four public places, libraries, etc.

Mr. Frank Daggett, as a special Publicity Committee, has published a number of short articles in various newspapers. One of our Italian papers has printed an appeal for the birds; but our most important work in this line, largely brought about by Miss Amalie Hannig and our President, Mr. Deane, has been the publication in the September, 1909 number of the Ladies' Home Journal, of a series of graphic pictures, with a few words explaining each one, illustrating the tragic story of the aigrette. The hearty thanks, not only of the Illinois Society, but of all bird-lovers and humane workers, are due the editor of this paper and his associates. To Mr. George B. McCutcheon, that talented and kindly cartoonist, bird-lovers also owe a debt for his two cartoons, "Speaking of Easter Hats" and "The Slaughter of the Innocents."

Two illustrated lectures have been given, one by Mr. Wm. L. Finley, in December, "On the Trail of the Plume Hunter," and one by Dr. Dearborn, at the annual meeting of May 1, on "Studies in Bird Life." That Dr. Dearborn has left our state is a loss much felt by our Society.

Mrs. H. C. Adams, Chairman of the Forestry Committee of the Illinois Federation of Woman's Clubs, is doing yeoman's service for the trees and birds. Through her influence, some 1,500 children of her home town (Danville) have joined the Audubon Society, and the Woman's Club have taken up the study of forestry and birds in a series of twenty-seven meetings, one of which is entirely devoted to such topics as "Audubon Work", "Game Laws, etc.," while at nearly all the others one or two birds are made a special subject, in addition to forestry matters.

At our annual meeting, a resolution was passed endorsing a bill asking for the appointment of a Forestry Committee and the setting aside of a Reservation in Ogle county. This bill did not pass; but a Humane Education Bill, which requires the teaching in the public schools of "humane treatment and protection of birds and animals, and the important part they fulfil in the economy of nature," and also requires the consideration of this subject once a year at Teachers' Institutes, did become a law.—MARY DRUMMOND, *Secretary*.

Indiana.—The activities of the Indiana Audubon Society have been continued along the lines which experience has proved to give the best results. These are, educational work in the schools, through the press, and lectures and bird talks given throughout the state. The Society has loaned its set of slides, and added considerably to the number of slides in use. Pamphlets and literature have been sent to various clubs and societies interested in nature and bird study. In co-operation with the Indiana Humane Society and the State Fish and Game Commission, much has been done for the enforcement of the bird laws. At present, a special effort is being made to discourage the sale of "aigrettes."

The increased interest in bird study in the regular school work is gratifying; many of the schools having the study of one bird carried through the year in each grade. The pupils begin with the nest study in the winter, which leads to interest in watching for the return of the bird being studied, and a sympathetic study of its habits, song, etc., on its return. This kind of work is developing an interest in the living bird, which means much in the way of bird protection.

The annual meeting of the Society was held this year in Newcastle. At the two evening meetings held in the largest church, the house was filled to the doors, to listen to stereopticon lectures by Mr. A. W. Butler and Dr. D. W. Dennis. The afternoon meeting was held in the Horticultural and Historical Society rooms, with "standing room" only. These societies are very strong organizations, working along the line of the economic value of birds, doing much field study, and their influence is much felt in their part of the state. The morning sessions were held in the various schools of Newcastle, bird talks being given by the Audubon Society members in every school in the city.—FLORENCE A. HOWE, *Secretary*.

Iowa.—The growth of the Society has been slow, but substantial and gratifying to all workers. Many Leaflets have been sent out, and 167 names added to the membership. Warning notices have been sent to milliners, in some localities, regarding the law concerning the sale, transportation and shipping of plumage of all non-game birds killed within or without the state.

The teachers in our public schools are endeavoring to instill the love of nature into the minds of the young, and, generally speaking, they find the children very responsive to suggestions for bird study.

During the spring time, the members and officers of the Audubon Society receive and respond to many invitations from teachers' clubs and library associations, for talks on birds and nature study.

We are greatly indebted to Miss Jane Hammond, of Schaler, Iowa, for a lantern and sixty beautiful slides, accompanied by a lecture prepared by Edward D. Clark of Washington, D. C., also several hundred valuable Leaflets on the subject of birds. This equipment is freely offered for use in any locality of the state, the only stipulation being that the shipping expenses be paid by the Society making the application for its use.

The club women of Iowa have taken up the cause. At the last Biennial of the Iowa Federation of Women's Clubs, May, 1909, the outgoing president, Mrs. John A. Nash, assisted in making the Audubon Society a part of the Federation, and, at the present time, the incoming President, Mrs. Julian W. Richards, has also greatly assisted the cause by placing the President of the Audubon Society, Mrs. W. B. Small, of Waterloo, on the standing committee on Conservation. So, henceforth, the conservation of our natural resources in the standing committees of the I. F. W. C. will include the protection of birds, as well as the preservation of forests and waterways.

Since we are supported by humane state legislation, and the penalty for the sale of bird plumage has been specified, it remains for the women of Iowa to assist the milliner in observing, instead of breaking, the law.

An appeal is made to all to join the Society, not only in sympathy, but by adding to its membership and thus substantially helping the cause.—MRS. WILLIAM F. PARROTT, *Secretary*.

Louisiana.—Owing to a change of President and a somewhat unsettled state of affairs, our meetings during the year have been confined chiefly to business, embracing several necessary changes in the charter, and much discussion of the policy of the Society, regarding the methods of the new State Game Commission; therefore, little work along educational lines was undertaken.

Monthly meetings were decided upon for the winter months, with illustrated lectures, if possible. A definite understanding regarding our attitude toward the State Game Commission was aimed at, and the resolutions concerning the platform of the Society were published, and also forwarded to the President of the National Association.

We are now working on common ground in regard to important resolutions on spring shooting, and the amount of license for professional hunters and a stricter supervision of them, knowing that the conditions here will not warrant an effort to abolish them altogether.

Owing to a financial shortage, the care of the bird islands and reservations has had to be left entirely in the hands of the National Association and the State Commission. To relieve these two bodies of this responsibility, as far as possible, will be one of the measures with which the Society will try to cope.

The Society in Louisiana has never had many active members, and, as those we have are mostly of New Orleans, it has been a much harder problem to interest new people in the birds themselves than it would be could one "take to the woods" with a would-be convert.

Many people find great hope in converting the farmer to the practical value of bird life to his farm; while some others of us have reason to believe him a pretty skeptical old fellow, whom "you can't fool with a cartload of statistics," but who would be generous enough to make a free gift of a little fruit and grain to the birds his children have learned to love.—KATHERINE S. WRAIGHT, *Secretary*.

Maine.—The interest during the year 1908-09 has increased to some extent.

A new local Society at York Village has been under process of organization, under the secretaryship of Miss Katherine Marshall.

Several illustrated lectures have been given by local secretaries, and membership has been increased.

The officers remain the same as last year.—ARTHUR H. NORTON, *Secretary*.

Massachusetts.—During the past year our membership has increased to 7,198 persons, of which 2,302 are juniors and 122 local secretaries. A new class of members has been admitted, called active members, who pay twenty-five cents per year. In addition to our local secretaries, we have four branch societies, called local committees.

A great many Leaflets, cloth warning-posters, and copies of the laws, have been distributed. Also, postal-cards issued by the State Fish and Game Commission, stating the law in regard to birds protected in our state, calling attention especially to the law forbidding the use or possession of feathers of small birds, Terns, Gulls, Grebes, Herons (including "aigrettes," "ospreys"), certain Owls and Hawks. The Educational Leaflets published by the National Association were especially liked.

Complaints of violations of law received were immediately reported to the state officers, the Fish and Game Commission, and promptly attended to.

Our four traveling libraries have been in constant use, and our three traveling lectures were used in a number of schools and clubs. There has been a good sale for our bird-charts, calendars, and plates. For our calendar this year we are to republish the plates used on our calendar for 1909. These plates, which came from Japan very late last fall, are uniform in style and artistic merit with our calendars for the past four years.

Our protection committee watched legislation closely, and we tried to aid Mr. Forbush in every way in our power. At the end of the season, it was voted that our Society appropriate \$100, to reimburse the National Association for legislative work up to May 1. We also voted a contribution of \$100 to the work for the Heath Hen which Dr. Field is doing at Martha's Vineyard, and one of \$50 toward the further protection of Gulls, etc.

Much time and work were given by one of our Directors, with a view to increasing our membership and coming into closer touch with our local secretaries than the Secretary's duties left her opportunity for.

The Society has offered a lecture on birds, free of expense; to the four local secretaries, or local committees, sending the largest number of new members before January 1, 1910.

Plans have been made for a three weeks' lecturing tour through the state by Mr. Baynes, for the purpose of stimulating interest in the work, and thus helping the local secretaries and committees. Subscriptions to cover part of the expense have been received.

Through the courtesy of Mr. Forbush, our charts, calendars, plates and leaflets were shown at the Sportsmen's Show. This fall we are planning an exhibit for the New England Fruit Show, and one for the "Boston 1915" Exposition.

The question of incorporation is under consideration, and a report of our work is to be published soon.

In addition to the regular monthly meetings of the Board of Directors, an annual meeting, open to the public, was held, and a course of four lectures given,

with Mr. Hoffman, Mr. Chapman, Mr. Underwood and Mr. Job, as lecturers.—MISS JESSIE E. KIMBALL, *Secretary*.

Maryland.—Since the report of 1908, there have been no new legal enactments.

It is the ambition of the bird-lovers of Maryland to have the model law passed, and to that end they work through educational methods. One great source of encouragement is the fact that it is now the exception, where it was once the rule, to see children on the country roads hurling stones at birds or robbing nests. These children will one day make the laws of Maryland; so good laws should evolve as naturally as fine fruit on a healthy tree.

It is saddening, however, to witness so little diminution in the wearing of the aigrette plumes; but we must remember that the progress of any permanent reform has never been a steady onrush; but, like the incoming tide, there is always a rolling backward—a series of retreats—to gain greater momentum for the next forward movement. Apparent retreat frequently precedes final success.

The passing of this cruel slaughter for the gratification of personal vanity will surely result, if every earnest woman will endeavor in a tactful way to influence her personal friends.

One of the prominent Woman's Clubs of the state is taking at this time a special interest in bird study. Each one of these women touches the lives of many others; so by simple, natural and yet powerful means will true reform be ultimately accomplished.—MINNA D. STARR, *Secretary*.

Michigan.—The work of the past year has been carried on mainly in the schools. We have been obliged to leave the enforcement of the law almost wholly to the game warden. The State Game Warden, Charles Pierce, has improved matters materially, although pot-hunting is still common. He has shown a willingness to coöperate with the Audubon and other protective Societies. The Audubonists joined with the Michigan Association in endorsing the bill prepared by the Association. This proposed bill provided for the abolishment of spring shooting, as well as a state license for hunters, which would have increased the revenue of the game warden and supplied him with sufficient deputies to carry out the law.

There was opposition from the sportsmen of the western portion of the state, and the bill was modified so as to provide for spring shooting with a shortened period. The bill passed the House, but failed in the Senate. The only reason given was that the bill provided for the taking of one deer during the season for each hunter, while the Senate insisted on the allowance of two deer, which amendment the House would not agree to. A bill passed prohibiting the killing of Quail until the year 1914, and Pinnated Grouse are absolutely protected. The season is extended to beaver, bear, otter, fisher, marten, fox, mink, raccoon and skunk and the protection of fur-bearing animals is much more stringent.

The fishing laws were considerably improved. The Michigan Association is making a special effort, with the aid of the Audubonists, to arouse sentiment in favor of more stringent law, especially in regard to spring shooting.

There is a strong feeling that the game warden should have no connection with politics. If it were not for the popularity of Game Warden Pierce, the question would be agitated with more vigor. Michigan is greatly influenced by New York, and we are in hopes we can show the advantages of a Commission, or at least of non-partisan appointments.

Our Society has given fifty prizes to schools during the year, and the Audubon Leaflets are now used in sixty-eight schools in the state. We have three good workers in this line. Our Vice-president, Mrs. Anna Walter, a club woman and newspaper writer, is endeavoring to discourage the wearing of feathers among the women members of the press and Women's Clubs, and is doing a splendid work.

A farmers' organization, known as the Grange, is strong in Michigan. The Secretary of the Audubon Society has spoken at a number of their meetings during the year, and outlined a plan of bird study, which was published in the Grange papers and taken up for study and discussion. There are 800 local lecturers or divisions. They asked to be supplied with Audubon literature, which was a greater task than we could meet. If we could secure their united support, the whole question of bird protection would be settled.

Our Society has coöperated with the Michigan State Humane Association, and is in hopes that by working together they can reach those portions of the state that are without organized effort in child, animal and bird protective work.—JEFFERSON BUTLER, *Secretary*.

Minnesota.—The Minnesota Audubon Society has, during the last year, confined itself to establishing school branches through the state. We have been aided in this by the County Superintendent of Schools in each county. In this way a large number of children have become interested, and have formed branch Societies in the more remote parts of the state, as well as in the cities. We have also interested the Humane Society of the state in bird protection, and have put up warning notices of prosecution for violation of our bird laws. Many persons, mostly boys, have been brought before the courts and fined and cautioned. We also have a department in the Institute of Science and Arts, with monthly lectures and frequent meetings. A large amount of literature has been sent out by ourselves and through the State Humane Society, and many letters answered from all parts of this state and western Wisconsin and northern Iowa and Dakota.

For want of funds, our work has been more limited than we could wish. Our Secretary has done good work and accomplished much by her correspondence, under really trying circumstances, being able to work only when through with her regular daily duties as teacher. On the whole, we can report progress of a very

satisfactory kind. We know that thousands are interested who before the organization of our Society never thought of the Birds, or protected them or their nests. Now you can see bird-houses all through the country, and the questions asked by children as to the names of birds and how to distinguish them shows a growing interest, which keeps us at our work and makes us feel that we are doing some good. We see fewer hats with birds on, which is satisfactory.—J. W. TAYLOR, *President*.

Mississippi.—The withdrawal from the field of Special Agent Kopman gave so severe a blow to the yet young and tender Audubon Society of Mississippi that a heavy falling off in paid membership must be reported for the past year. There has been progress in the state in the matter of legislation among the counties, the gun license showing a steady growth in favor and the bag limit exhibiting a downward tendency.

The educational work done by the Secretary in the Summer Normal School at Hattiesburg, aroused some interest among the teachers. This work will be continued throughout the school session by the publishing of monthly articles on birds and bird study in the Mississippi School Journal. A campaign to increase the paid membership is now in progress, and we hope for less of the minor chord in our tidings of 1910.—ANDREW ALLISON, *Secretary*.

Nebraska.—While the efforts of our Nebraska Society have not been increased, they are maintained. It is aimed to put a book on birds or a chart into the library now to be placed in each school in the state, under a new law. Our Check-list also should go with it. This names 400 species eastern, western and rare, seen in Nebraska, prepared at our suggestion by the University specialists. Funds are our great need.—S. R. TOWNE, *Secretary*.

New Hampshire.—The work of the New Hampshire Audubon Society for the past year has been much the same as usual.

The principal work accomplished has been the free distribution of the "Prang" Educational Leaflets and Bird-charts to the remoter districts which could not afford to pay for them, the posting of game laws and warnings, the loaning of bird books, sending to the principal newspapers of the state Mr. Forbush's semi-monthly articles on bird protection and the work of the Audubon Societies, and the establishing of a memorial day in the public schools in honor of Audubon's birthday.

There has been a change of officers in the Society, and we cannot say how deeply we regret Mrs. Batchelder's resignation as Secretary and Treasurer. She has served the Society faithfully and competently for twelve years, and she now feels obliged to withdraw from active work on account of numerous pressing duties. The present officers are as follows:

President, Mrs. Arthur E. Clark; Vice-presidents, Mrs. J. Byron Chandler,

Mrs. H. Melville French, Mrs. Frank Carpenter, Mrs. F. W. Batchelder, Mrs. John C. Bickford; Vice-president in charge of organizing branches, Miss Margueritte Morrill; Corresponding Secretary, Miss Sarah Hazard; Recording Secretary, Miss Margaret French; Historian, Miss Christine Johnson; Treasurer, Miss Louise Means.

Our last meeting was in June at the home of our President, Mrs. Arthur E. Clark, and was most delightful and instructive. We met in the arbor in Mrs. Clark's flower garden midst the fragrance of flowers and the singing of birds. A cherry tree nearby seemed to attract the Robins, for they sat in the branches and sang their beautiful song without stint, and quite outshone the orchestra which played later. Mr. Edward Howe Forbush, ornithologist of the state of Massachusetts, and New England Agent of the National Association of Audubon Societies, addressed the meeting, and earnestly advised all bird-lovers to exterminate as far as possible the English Sparrow and tramp cat—or cats without a home—as a measure for the protection of the birds we love. Mr. Forbush said that we should not allow the English Sparrow to occupy our bird-houses, that it was much better to close the openings than to have the houses so occupied. He also spoke about feeding the birds in the winter.

In closing, I should like to send BIRD-LORE readers some charming lines written some time ago for our New Hampshire Audubon Society. "The Plaint of Chocorua's Tenants," Elizabeth C. Bolles, whose summer home is here in New Hampshire at the foot of Chocorua. They are "a message from the heart of nature's self" and they will well bear re-reading.—MISS SARAH HAZARD, *Corresponding Secretary*.

New York.—The most important incident in the history of the Audubon Society of the state of New York, during the past year, was the failure of the Francis Bill to pass the Assembly. The whole story has been given to the public through the able Leaflets issued by Mr. Dutcher, which may be had upon application to either the State or the National organization. It presents a very curious commentary upon present-day legislative methods. The Assemblymen who voted against the bill were elected largely by residents of agricultural districts, and they placed themselves in the anomalous position of neglecting the interests of their constituents in a matter vitally concerning them, and of setting aside all moral and humane claims involved,—for what? To aid a small class of tradesmen to continue a nefarious business.

There is some satisfaction in knowing that their success cost in dollars more thousands than the Audubon Societies spent hundreds. The National Association again generously shared the expenses; the funds of the State Society were, however, much diminished by the struggle.

The State Society, in fact, was saved from bankruptcy last December only by a timely donation; however, the members responded finely to an appeal for funds, and all necessary expenses have been met. Through the kindness of our

Honorary Vice-president, Mrs. Frank K. Sturgis, a fair for the benefit of the Society has recently been held in Lenox.

We issued the new certificate last fall, and it has met with much favor. With the exception of the Annual Report, the Society has published no Leaflet during the year, using those of the National Association almost exclusively.

The Annual meeting last March was a notable affair. Mr. Louis Agassiz Fuertes gave a fascinating talk, illustrated by off-hand sketches of the birds, in color, with whistled imitations of their songs, to the delight of the large audience.

The work done among the school children by the Local Secretaries in the following towns deserves especial mention: Auburn, Fonda, Oneida, Ossining, Hudson, Binghamton, Olean. The work is also well under way in Orange county, under the charge of competent Local Secretaries.

The Buffalo Society has now organized with its own Executive Committee, and the spirit of utmost coöperation with the State Society is shown. Through their aid, the interests of bird protection in the western portion of the state should develop rapidly, and, with this efficient support, our next "Francis Bill" may become a law of the state.

The present total membership is 10,536.

The indications are that the coming season will show a great increase in the study of birds in the schools.—EMMA H. LOCKWOOD, *Secretary*.

New Jersey.—A request for a report of the work done by the New Jersey Audubon Society during the past year seems strikingly like an order for bricks without straw, inasmuch as the Secretary has so little material at her command for such a report.

All we can say is that the law for birds and the interest in birds is still here. As time goes on, methods of work have to be changed; and, while we do not make so many yearly additions to our membership as of yore, yet more and more children are reached through the influence of those who have been stirred to action in the past. Educational Leaflets have been distributed, and letters written in response to inquiries, but little has been done, to our knowledge, in the way of legislative work.

The Secretary would be much pleased if application could be made to her for leaflets or other literature, and she would be delighted to supply any such demand.—JULIA S. SCRIBNER, *Secretary*.

LaRue Holmes Nature Lovers' League, New Jersey.—The first lecture of the movement for the protection of nature, known as the LaRue Holmes Nature Lovers' League, was given by Mr. William Dutcher of the National Audubon Society, in March, 1906.

The League movement is not a memorial, but simply a continuation of work begun by its originator, whose name was given to the organization by the Board of Directors, after his death.

The purpose of the movement is to awaken the public to a keener sense of the vital importance of nature protection, in which is involved the future health and financial prosperity of this country. Further purposes: To lay a hand against remaining elements of barbarism and vandalism in human nature; to implant in youth the ennobling ethical sentiment of self-restraint; heroism for another, however humble or weak.



LAUGHING GULL ON NEST

Taken on LaRue Holmes Nature Lovers' League Bird Refuge, Cape May County, New Jersey. Island of one hundred and fifty acres—purchased and dedicated in perpetuity as a bird-breeding place and sanctuary. Photographed by B. S. Bowdish

The funds of the organization are used in giving lectures, in the distribution of Leaflets, literature treating of nature and the need of protection, etc. No officer receives any returns for directing the work, except in pleasure which results through returns for securing members, collecting dues, or other parts of the League service apart from professional lectures.

One hundred and ten addresses have been given since the last Report was issued. Thanks are due the following-named members and friends who have given addresses on forestry, bird life, conchology, self-restraint and other topics: Messrs. O. C. Horseman, R. B. Werney, A. MacCall, B. O. Tyler, Wm. Hughes,

E. V. Curtis, C. E. Hasselgrave, I. MacNaughton, W. Hoppaugh, J. W. VanIngan, R. Wilkinson, H. B. Kummel, H. Tuttle; to the United States Forestry Service for lectures by Mr. Enos A. Mills, and to Mr. B. S. Bowdish, through whose courtesy, and that of the National Audubon Society, eleven illustrated addresses on birds were given. Thanks are also due Miss Julia Rogers, Miss L. R. Morris, and Miss M. A. Burnett, for similar service.



LAUGHING GULL NEST AND EGGS

LaRue Holmes Nature Lovers' League Bird Refuge. Formerly the scene of merciless slaughter of breeding birds for millinery ornaments. Photographed by B. S. Bowdish

Our chapters have found much pleasure in the address given by Mr. A. S. Williams, illustrated by living reptiles, and in the entertainments given by Mr. E. Avis, who so wonderfully reproduces the bird songs, the joyous choirs of the woods.

Immediately after the organization of the League movement, Mr. William Dutcher, who is ever alert to provide for the needs of our little feathered friends, called attention to the fact that no provision had been made, through any agency, for the protection of the Gulls, and other birds nesting on the New Jersey coast. Mr. Dutcher kindly consented to negotiate for the purchase, in behalf of the organization, of an island of some hundred and fifty acres, hereafter to be known

as the LaRue Holmes Nature Lovers' League Bird Refuge, which has recently, through the kind agency referred to, been conveyed to League ownership.

The island is a level, marshy expanse, lying near Stone Harbor, Cape May county, where the Gulls have bred for centuries, and whence they would eventually be driven were no means taken for their protection.

The island was formerly the scene of merciless slaughter of Gulls to meet the cruel demand of women for their plumage; thousands being slain, and but a few hundred remaining. Had not the National Audubon Society sprung to the rescue, extermination had completed its devastating work; but competent warden service has resulted in an increase of the Gull colony now numbering from 1,200 to 1,500. The La Rue Holmes Nature Lovers' League now takes up the responsibility of the warden service.

The Gulls are the scavengers of the coast, necessary to healthful conditions along the shore. They are life-savers, giving warning to seamen, to whom lights and fog-horns are lost in the obscurity and the uproar of storms; the wings of the Gull go through fogs, and give warnings that land is near. The Gull, sweeping ever across the waters, and cradled at night upon the sea, is an embodiment of poetry, as well as an asset in utility, which New Jersey cannot afford to lose.

The League membership roll has now increased to thousands, distributed through thirty-six chapters. Sixty thousand bird pictures, nearly eight thousand booklets, leaflets and pamphlets, and a number of thousand packages of garden seeds have been distributed since giving our last report.

Of essays on natural history subjects, submitted to the Committee, 140 were sent for publication to Newark and other local papers.

Interest in the League movement is deepening. The most encouraging reports reach us of the changed attitude toward humble life, among children, through League influence. Where we work there stands no material building, but the fabric we are fashioning is built into human character. He who catches the inspiration to find joy in creating happiness for another thereby brings into his own life one of the elements of nobility and strength.—GEORGIANA KLINGLE HOLMES, *General Secretary*.

North Carolina.—The Audubon work in North Carolina, the past year, has been conducted along the same general lines of activity as in previous years. The educational endeavor has been pushed as heretofore. Twenty-one junior secretaries have charge of local organizations consisting chiefly of children who are doing work in bird study. One of these classes contains over one hundred and sixty members. Each secretary is supplied with "BIRD-LORE" and a library consisting of ten or fifteen volumes of bird and general-nature books. The pupils are all furnished with Audubon Mockingbird buttons and the Leaflets issued by the National Association. Thousands of pages of literature have also been mailed to other teachers in schools of all grades. The Secretary has given a number of public lectures before representative gatherings in the state. A force of exactly

100 wardens has been employed, on fees or salary, to enforce the bird and Game protective laws. These officers have distributed literature, posted warning-notices, and by their activity have prevented much illegal killing of wild birds and animals. Especial attention has been given to the enforcement of the laws providing close seasons for the killing of Quail, Wild Turkeys and Robins. The breeding colonies of sea birds have also been carefully guarded. Many arrests have been made for violations of the game laws, and in 163 cases the defendants were convicted. The Society does not receive any revenue from this



ROYAL TERNS ON PROTECTED SAND-BAR IN NORTH CAROLINA

Photographed by P. B. Phillipp

source, as, by a constitutional provision in North Carolina, all fines and forfeitures go to the school fund.

Our legislature met the past winter, at which time, by a concerted effort on the part of those who disapprove of the work of the Audubon Society, an effort was made to destroy its usefulness. In this, however, they were only partly successful, while, on the other hand, the Society and its friends were able to secure the passage of a number of local laws providing for much-needed restrictions on hunting.

Our receipts for the year were \$12,947.35, and our expenditures \$12,758.20, leaving a balance on hand of \$188.53.—T. GILBERT PEARSON, *Secretary*.

Ohio.—The past year has been the banner year in the history of the Audubon Society of Ohio, at least as regards the educational work. We saw what could be done by a systematic and well-directed effort on the part of a corps of enthusiastic, capable members of our Society, and we feel assured that the work has not been without its definite effect upon the thousands of school children who so thoroughly enjoyed the series of lectures on "Birds" which were given in every part of Cincinnati last year.

The plan was as follows: We had as many as half a dozen lectures (mostly



SAND-BAR IN NORTH CAROLINA OCCUPIED BY ROYAL TERNS

It is only a few inches above sea-level and storm-tides often sweep over it, destroying all the young birds and eggs. Note grouping of birds about Audubon warning notice. Photographed by P. B. Philipp.

lantern-slide talks) in the various branch libraries, on the same afternoon, for which tickets of admission were issued only to those students who were interested enough to attend. We divided the public schools into sections, allowing about six schools to each library, and sending only enough tickets not to exceed the capacity of each auditorium. By rotating the lecturers, we managed to give a series of three lectures in each branch library; and the way in which the children responded is sufficient evidence that the subject is one that appeals to a child's imagination. This was the second year that the bird lectures were given, but on a more extended scale, and we feel gratified with the result.

Not only did we have the coöperation of the principals and teachers of the public schools which Superintendent Dyer made possible, and the help of the librarians in the various branch libraries, but even our University auditorium and ornithological exhibit were thrown open to the young people, and a delightful repast served to them in a talk on "Table Manners of the Birds," by Professor Harris M. Benedict.

We feel a sort of gratified pride in having been in any way responsible for a linking together in a common bond of study the three systems of education of Cincinnati,—the public schools, the libraries and the University. We hope that this series of lectures may become an established custom, and that they will always be so fascinating and attractive as to be their own advertisement. Nor must we forget to express our gratitude to the newspapers, which have, both editorially and reportorially, given ample encouragement to the public to take up the study of birds.

A very gratifying piece of news is the establishment of a new branch Audubon Society in Covington, Kentucky. Covington really ought to be a suburb of Cincinnati, it is so closely related, commercially and socially; and so we feel that this local Society, while in another state, belongs to us, as it really was formed and launched under the efficient guidance of our President, Mr. Wm. Hubbell Fisher, and we feel a parental pride in the auspicious beginning of the life of the new fledgeling.

Our field meetings were many and very enjoyable. Here, again, we see the inter-relation of the University and the Audubon Society, as most of the excursionists were connected with one or both institutions.

We can see where we have made great advance over the preceding year; but we are not blind to our weak points, and hope to strengthen these in the near future.

While there are many requests for literature and information from all parts of the state, there has never been sufficient time or funds, as yet, to establish many strong local societies in Ohio. There are a few, but not a systematic chain of forts, as we dream of in the not-impossible future. But first we must fortify ourselves financially, to make the other fortification possible.

The Committee on Bird-houses, under the efficient chairmanship of Prof. George W. Harper, went quietly but effectively to work, and in May reported over one thousand Bird-homes completed by the pupils in the manual-training department of the public schools, ready for placing in the parks. Our monthly meetings are still as attractive as possible, when those who have been busy in the good cause are allowed to sit back and enjoy hearing some charming narration of bird observation.

Last year also records a visit from Professor Finley, with his unsurpassed stereopticon pictures.

The work goes steadily on, making itself felt in many ways,—in our own lives, and in those about us; and we hope the little feathered creatures feel safer

and freer "to enjoy life, liberty, and the pursuit of happiness," because of some small service on our part.

May the new year see a continuance of the effort to spread broadcast the ideals of the Audubon Society of Ohio.—KATHERINE RATTERMANN, *Secretary*.

Since the above was written, the Society has lost its President. Almost his last work was to read and approve this report.—(K. R.)

In Memoriam

WILLIAM HUBBELL FISHER

BORN NOVEMBER 26, 1843,

DIED OCTOBER 6, 1909

"Will ye not send one tone of sorrow
Through the pines,—one murmur low;
Shall not the green fields,
From your voices know
That I, your friend, am gone?"

"William Hubbell Fisher, the friend of birds and children, has passed away. Always a lover of nature and her works, a devoted friend of birds and their protection, he organized the Audubon Society of Ohio in 1898, and was elected its President, and has been reelected every year since. He never missed an opportunity to advance the cause of birds and the study of their lives and habits.

"Resolved: That the Audubon Society of Ohio has lost its most valuable member, and it hereby extends to the family its sincere sympathy in its great loss."

In these words the Audubon Society of Ohio, through its Committee, tried to express its deep sorrow in the loss of its President, who died, after a very short illness, October 6, 1909.

William Hubbell Fisher was born in Albany, New York, November 26, 1843, the son of Rev. Samuel Ware Fisher, a Presbyterian minister, who later became president of Hamilton College, at Clinton, New York, and it was there that William Hubbell Fisher graduated in 1864.

He always associated himself with such organizations as tended to the uplift and the raising of the ideals of humanity, and his loss will be felt in many circles of Cincinnati and other localities, where his happy, genial disposition made him such a general favorite. A man of culture and refinement, he was a valuable



WILLIAM HUBBELL FISHER

addition to any society, as is shown by the high positions of honor which he held. He was a member of the honorary fraternity of Phi Beta Kappa, a life member of the American Forestry Association, a member of the Cincinnati Literary Club, President of the Cincinnati Society of Natural History, Corresponding Secretary of the Cincinnati Young Men's Christian Association, and Superintendent of the Sunday School of the Presbyterian Church of the Covenant, of Cincinnati; and, as before stated, he was the president and recognized head of the Audubon Society of Ohio.

William Hubbell Fisher has passed away; but he leaves behind him a record of a noble life, an example which those who honor his memory may strive to emulate.

Oklahoma.—The Oklahoma State Audubon Society has established headquarters in the office of the Local County Superintendent of Public Instruction at Guthrie.

As a result of the agitation, and the distribution of literature by the state officers, interest in the work has more than doubled during the past year. Members pay their dues cheerfully, and teachers and pupils in the public schools are making the study of birds a part of the regular school work, and many schools have established annual Bird Days. The Capitol School at Guthrie, celebrated, May 4, Audubon's birthday anniversary as Bird Day, and the essays, talks, orations, songs and bird drawings and paintings, furnished abundant evidence of the fact that the study of birds had been given much attention and had developed good results.

The State Convention will be held in November, and plans will be laid for the extension of the work.—ALMA CARSON, *Secretary*.

Oregon.—The year has been one of reasonable activity. A large amount of literature published by the National Association, as well as Educational Leaflets of our own, have been sent to teachers and others. Every public library in the state was furnished with one or more complete sets, as were the Granges of the state.

From reports in various sections of the state, especially among fruit growers, we learn that there is a general sentiment in favor of bird protection; only in isolated cases or regarding special species is there any complaint.

There is a demand for lectures and familiar talks on bird subjects to societies, Granges and schools. We meet these requests as far as possible, and are pleased to find that the schools give enthusiastic welcome and a request for more.

During the legislative session last winter, there were no bills introduced that interfered with our model bird law. The game laws were codified. The season for Ducks was shortened one month in the fall, and lengthened fifteen days in the spring. The law gives a number of closed years for Elk, Antelope and Mountain Sheep, and protects Doves, Wild Pigeons, Shore and Wading Birds. A law

was also passed which prevents the burning or setting fire to tules in the swamps where Ducks, Geese and other birds are accustomed to nest. With these improvements, we think our laws are not surpassed by any state in the Union.

There seems to be little complaint of shooting on the reservations, the work accomplished by the wardens being very satisfactory. Mr. Alva Lewis, the warden on Klamath Reserve, by arresting the Mayor of Merrill and three other leading citizens, for shooting Ducks on the Reserve, taught hunters throughout that locality to give more heed to the observance of game laws.

This Society has sent \$200 to the National Association, to assist in caring for the Oregon Reservations. It is our intention, later in the season, to use another hundred for the purchase of an extra launch for use of the warden on Malheur Lake.

Early in the spring, letters were sent to the milliners of the state, warning them that the laws protecting native birds were to be enforced, and that no plumage of these birds could be sold. No regard was paid to the letters, and we caused the arrest of ten of the leading milliners of Portland. Two of the ten repeated the offense, and were again arrested. They all pleaded guilty and were fined, the fees amounting to \$140. These arrests related especially to the sale of aigrettes, and, while we have reason to think that there are some aigrettes sold, they are sold under cover and promise of secrecy. In the main, the sale of these plumes has been stopped, and a salutary lesson taught, by the publicity given through papers and otherwise. We have in the past month become incorporated under the laws of Oregon. We expect this year to push our work along the lines open to us, realizing that "precept upon precept, here a little and there a little," when taken together, makes a goodly sum.—E. J. WELTY, M.D., *Corresponding Secretary*.

Pennsylvania.—The work of the Society during the past year has been more in the schools than ever before, and therefore encouraging. A number of teachers have taken up the work in a most enthusiastic and intelligent way, with most satisfactory results among their pupils.

A number of Audubon Clubs through the state have been busy doing field work during the spring and summer, after careful preparatory winter work in the museum collections. Our club made a special study of the songs of the Thrushes, and, by patience and hard work, gained a remarkably good idea of the identity of this puzzling family of singers by their notes alone.

A step backward in legislation has to be reported, for, in spite of opposition from the Audubon Society and other bird-lovers, the Bald Eagle, Osprey, Heron, Bittern, Kingfisher and Shrike have been taken off the protected list. To somewhat compensate for this error, however, we have a law which forbids "unnaturalized foreign-born residents of the state to hunt or own shotguns or rifles." The traveling libraries took their usual place in the work of the year, and several additions were made to their list.—ELIZABETH W. FISHER, *Secretary*.

Rhode Island.—The Audubon work in Rhode Island has been carried on during the past year along four main lines: Education, Legislation, Traveling Libraries and Lecturers.

The educational work has been emphasized and extended by the zealous efforts of the Education Committee, of which Mrs. Herbert E. Walter is the chairman. The aim is to introduce bird study into the secondary schools of the state as fast as the teachers are prepared to teach it and the necessary illustrative material can be supplied. A good deal of interest was aroused, and valuable suggestions were given to the teachers, at a Nature Study Conference arranged by the Education Committee and held at the Rhode Island Normal School on April 8. Prof. C. F. Hodge, of Clark University, gave an inspiring lecture on "Practical Methods in Teaching Nature Study," illustrated by domesticated Bobwhites and colored slides.

The Committee is getting together, in coöperation with the Park Museum, twelve sets of material to illustrate the economic value of birds, to loan to the rural schools. The Museum will supply similar collections to the City Schools.

Interest in legislation has been fostered by the Committee on Legislation, working in coöperation with the Bird Commissioners of the state and Mr. Edward H. Forbush, with the result that on April 6 our state legislature passed the Hunters' License Bill. This requires registration of all and license fees as follows: \$1 for each citizen resident in the state; \$10 for each citizen non-resident in the state; \$15 for each unnaturalized foreign-born person. A fine of \$20, \$50, or thirty days' imprisonment, or both, is imposed for violation of this act. The Committee also petitioned our Senators and Representatives to favor the bill for the Federal Protection of the migratory birds.

The traveling library work has been extended in interest by the addition of four new libraries, making eleven libraries and 275 books in all. Two of these were bought largely by a grant from the State Appropriation for traveling libraries, one was given by an interested and generous member, and one by the publishers of Nature Study books and exhibited at the Conference. The last two libraries will be circulated through the public schools.

The lectures during the year have been of great interest and have reached more people than ever before. Two lecture centers have been established through the education Committee at the Providence Public Library and the Roger Williams Park Museum, at each of which four free bird lectures were given during last spring. Eight lectures were given also in different grammar schools by Mr. Murphy, of our Society. All these were in addition to the valuable series of illustrated popular lectures, which were given before the Society and its friends, after the bi-monthly meetings of the Directors, by Mr. Forbush of Boston. Mr. Murphy, of Brown University, Professor Hodge, of Clark University, and Mr. Clinton G. Abbott, of New York City.

The Society has published a full report, giving its officers, members, by-laws and results of the varied work of the Society.—ALICE W. WILCOX, *Secretary*.

South Carolina.—Hard fighting, with continued progress, has marked the third year of the Society's labors. Nothing resulted from the effort to get a Game Commissioner appointed and a resident license law passed, at the last session of the general assembly, which met in January.

The Society secured a moral victory, and met with a more cordial reception than it has ever yet had; but politics was supreme, and the bills brought in from the Committees were not acted on.

Since that time, the Secretary has consistently directed attention to the various farmers' organizations in the state, and has secured their endorsement in turn. The Society will go before the legislature next time with the endorsement of every organization of farmers in South Carolina. This ought to be sufficient to secure the necessary legislation.

FIELD WORK.—Failure in the halls of legislation has been offset by success in the field. The Secretary organized a branch Society in the city of Charleston with a large and enthusiastic membership, and this led to a consolidation with the South Carolina Audubon Society, organized in 1900 (January 4). This Society, of which Miss Sarah A. Smythe, of Charleston, was the able and untiring Secretary, had carried on its good work unaided for many years, and had produced a visible effect. During a stay of four months in Charleston, this last winter and spring, the Secretary saw only three aigrettes, and was intensely gratified to learn that they were worn by visitors. No Charleston woman of good breeding wears them.

THE CHARLESTON BRANCH.—The officers of the Charleston Branch are well-known business men and sportsmen. The President is Frederic L. Green, Teller of the Bank of Charleston; the Vice-president is Edward F. Lowndes, of the Virginia-Carolina Chemical Company; and the Secretary is Capt. George H. Petermann, of the large wholesale firm of Petermann Bros., East Bay, and also member of the B. H. Worthen Arms Company, King Street.

The membership represents the very best business, social and professional elements of Charleston—the typical Charleston, about which one reads in the romances and the histories.

The significance of this is of the last importance to the cause of bird protection on the coast. Charleston is still surrounded by immense plantations, and by large hunting preserves, the owners of which can render service of utmost value to bird protection. The consolidation of all these interests into one Society, dominated by a common aim, was a work that would have been sufficient for an ordinary lifetime. The result is that the South Carolina coast-line, rich beyond computation in the variety and extent of its bird life, is now guarded by a militant camp of citizens.

One immediate effect was the trial and conviction of Arthur Lambert, notorious poacher and plume hunter. Lambert had shot up the rookery of American Egrets, photographed by Mr. F. M. Chapman, and, when hotly pursued by wardens with warrants, had sprung overboard in Sampit river and swum ashore,

escaping into the swamps of Georgetown county, with which he was perfectly familiar. Some two weeks afterward he was captured in Georgetown, secreted in a trunk, by Deputy Jake Ward.

Lambert was carried to McClellanville, Charleston county, tried before Magistrate G. W. Ward, and convicted, both of trespass and of killing non-game birds. He was accompanied by one Palmer, notorious "blind tiger" or illicit whiskey dealer, of Georgetown, who has been acting as a broker in buying plumes. The conviction put a stop to plume-hunting for this season, but it will have to be fought another year.

EDUCATIONAL WORK.—The Secretary has been in the field the whole year, talking to every kind of audience on the subject of birds and their protection. Meetings were held on the Sea Islands, in the interior, and even in the mountains. The work has met general favor, and has been expedited by the cordial coöperation of the men engaged in farm demonstration for the United States Department of Agriculture. A strong sentiment for bird protection is now coextensive with the state, and the Farmers' Union, representing about 35,000 farmers in the state, has actively declared for the Audubon Society, and is backing its work with all the energy at its command. There will be no active opposition in the general assembly of a direct kind, but politicians will fight to take over the appointing of wardens, or whatever else they may be able to make capital out of.

MEMBERSHIP.—The membership of the Society has grown steadily, and will have doubled since last year, provided there is general renewal of membership, as is to be expected. Renewal is proceeding in a satisfactory manner, but not all members have been heard from yet. At any rate, there has been healthy and vigorous growth.

As far as possible, the cause has been taken to the schools, and Secretary Rice has talked to negro schools, as well as to schools for white children, receiving hearty response from both.

The annual meeting has not yet been called, but will be held at some time during the fall.

There has been, on the whole, less friction in enforcing law, but there has been some. Wardens Weathersbe and Williams were fired into by fish poachers near Langley, and a desperate battle ensued, ending happily without loss of life; but all of the fishermen, three in number, were wounded, and Warden Weathersbe was shot through the arm. The wardens were indicted for assault and battery and riot, but were acquitted by a jury at Aiken. Convictions have been numerous, but have not yet been tabulated, and it is not practicable to give them here. There is marked difference in observance of law, especially as relates to non-game birds.

The state has been visited by a number of insect pests, many of which are new, and this has emphasized the need of protecting the insect-eating birds. The next annual report will contain much statistical data, not included in former reports.—JAMES HENRY RICE, JR., *Secretary*.

Texas.—Following legislative work last winter, beginning about the middle of January and ending in May, which was partially successful, the Texas Audubon Society has maintained two lecturers in the field, one being the Secretary, and has very nearly covered the state so far as cities and towns of from 5,000 to 10,000 population are concerned. We have also, during the present year, lectured in five of the cities of over 20,000 population, before large audiences, in the latter case invariably using the stereopticon and slides.

The Texas Audubon Society believes that it has made a strong and lasting impression upon this state in favor of the preservation of the wild birds and animals of the fields and forests. We have also assisted the Fish Commissioner in his duties, and have protected the streams, to a considerable extent, from those who take fish by unlawful methods. We have encouraged the creation of artificial lakes, and the distribution of improved fish, supplied from the hatcheries of the United States Government. We have coöperated with the State Warden Department, and have succeeded in procuring about twenty convictions for violations of the Bird and Game Law.

The Secretary of the Texas Audubon Society is convinced that the most effective work that has been done in promoting interest in bird and game protection has been lectures delivered before the farmers' and teachers' institutes and the boys' corn clubs of the state. Those bodies constitute what might be called "ready-made audiences," and, whenever they meet, an Audubon man is heartily welcomed, and accorded a place on the program with liberty to consume whatever time he thinks proper in conveying his message to those present, who always show the deepest interest and ask many questions. The Texas Audubon Society assumed some of the duties of the forest service, and labored in the prevention of unnecessary destruction of trees by lumbermen and by fires. A large mass of literature, supplied by the federal forest service, was circulated along with the Audubon literature and distributed on lecture occasions.

The last legislature, while passing a license clause, did so in the fashion of a button with a string on it. It was provided that no license should be required for gunning in the gunner's residence county and in the counties adjacent to his residence county. In very many cases, this leaves unlicensed gunners the privilege of districts larger than some of the smaller states of the Union, and the exemption defeated one of the chief purposes of our advocacy of the gun license, for it left in the fields the hordes of cheap-gun aliens and lower classes, who shoot indiscriminately and are the chief destroyers of wild life wherever it can be found. A uniform gun license would have eliminated not less than 25,000 gunners of this state who would never pay any license at all, and would be subject to arrest and imprisonment when found taking birds or game at any season.

We are now working hard to get into better shape before the next legislature, and we hope to at length accomplish our purpose, feeling certain that, if we can accomplish all we have undertaken, the birds and game of Texas will be preserved for future generations.—M. B. DAVIS, *Secretary*.

Vermont.—A forward movement was made for bird protection at the recent session of our State Legislature, when a hunters' license law was passed. Although the bill was modified somewhat from that originally introduced, we feel that the principle was recognized. The bill, as amended, provides for a fee of fifty cents for resident hunters and fifteen dollars for non-resident hunters. Although the law has been in force only a little over a month, it is reported that 20,000 licenses have already been issued, thus bringing \$10,000 at least for bird protection.

A law was enacted prohibiting the shooting of Wild Ducks by any kind of artificial light, or with a boat propelled otherwise than by hand.

A closed season was made for Upland Plover until the year 1915, for Quail until 1911, for English Pheasant until 1913. The open season for Ruffed Grouse and Woodcock was shortened fifteen days, from September 15 to November 15. The number of Grouse and Woodcock that a single hunter may shoot during the open season was lessened from thirty-five to twenty-five.

A bill providing a bounty on Hawks was introduced, but died in Committee. A bill allowing fruit-growers to kill Cedar birds gave us a struggle. It passed the House, and probably would have passed the Senate but for the timely appearance on the scene of Mr. E. H. Forbush. In fact, most of the legislation mentioned above may be credited, in large part, to his persistent and faithful efforts. The influence of the State Game Commissioner, Mr. H. G. Thomas, was on the right side, and helped us greatly.

The Secretary has distributed thousands of Audubon Leaflets, and given many bird lectures in different parts of the state.

At the suggestion of the State Commissioner of Agriculture, the Secretary has prepared a forty-page bulletin, entitled, "Birds in Relation to the Vermont Farmer," which will be distributed to the farmers of the state and also to the schools.—CARLTON D. HOWE, *Secretary*.

Virginia.—The Audubon Society of Virginia, organized in December, 1908, chartered April 2, 1909, now numbers about two hundred and fifty members in the city of Richmond and several hundred throughout the state.

Junior Societies for the study of birds have been formed among the school children under the direction of Miss Weddell.

Leaflets on birds have been distributed among them.

The boys have made bird-boxes, which have been put on the grounds of suburban residents.

Several outings were held in the spring for the purpose of studying the native birds.

Three free lectures, illustrated by stereopticon views, were given during the winter, the first by Mr. T. Gilbert Pearson, Secretary of the Audubon Society of North Carolina, the second by Dr. Henry Oldys, Department of Agriculture, Washington, D. C., and the third by Mr. Frank M. Chapman, the foremost ornithologist in the country.

Branch Societies have been formed in Ashland, Va., under the direction of Mrs. Smythey; and in Lynchburg, Va., under the direction of Miss Mosher.

Col. Eugene Massie of Richmond has been appointed head of the Legislative Committee to represent the Society before the legislature, with the view of securing a good game-warden system.

An exhibit of stuffed birds, eggs, nests and pictures was held at the State Fair, October 4-9, under the able supervision of Miss Katharine H. Stuart, of Alexandria.

Hundreds of Leaflets were distributed, and posters were placed in the Agricultural Department, to enlist the interest of the farmers in the work of protecting the native birds.—MISS I. G. FITZPATRICK, *Secretary*.

Washington.—The State Society has been successful in securing the enforcement of the law regarding the sale of illegal plumage. We have entered into a contract with the milliners throughout the state to allow them to dispose of all their stock on hand before January 1, 1910. They have pledged themselves that after said date they will aid and assist us in enforcing the law.

During the past year, we have been successful in securing convictions against some fifty-three violators of non-game bird laws. Four of these were cases where the skins were shipped from the Orient; one case was contested, but we secured the conviction; the others, after seizing the goods, were placed under arrest, entered a plea of guilty, were fined and surrendered the goods.

From general reports throughout the state of Washington, I find that the sentiment for the protection of wild bird-life is greatly on the increase. The members are doing active work along these lines.

The coming year promises to be active and prosperous.—H. RIEF, *Secretary*.

Wisconsin.—The Wisconsin Audubon Society has been very active during the year 1908-1909. Five directors' meetings were held in Madison, at which matters of importance connected with the advancement of the state wild-bird protection movement were considered.

Early in the year, the Society loaned to the Milwaukee Public Museum the greater portion of its series of bird-study lantern slides. They were in constant use at that institution by Lecturer Alfred C. Burrill of the museum staff, from March until June, being employed in connection with illustrated nature-study lectures to the public school children of Milwaukee. They were used before seventy-six different audiences, embracing a total of nearly three thousand pupils. Certainly, no better use of these slides has ever been made, and Mr. Burrill's carefully prepared lectures to these children should be the means of saving the lives of many useful birds. Some of the slides were also used in several lectures given to adult audiences in that city. At the Society's suggestion, about forty of them were also loaned to Milwaukee-Downer College, for the use of a class in bird study. As the lantern slides were in continuous use in Milwaukee, a number

of requests for their loan received from other parts of the state had to be denied. As the Milwaukee institution has now provided itself with a collection of bird slides of its own, this difficulty of meeting other requests need not occur in the future.

At the 1909 session of the state legislature, several measures proposing to again permit the hunting of wild Ducks during a limited term in the spring of each year were introduced. These bills were supported by a very large number of hunters and misguided citizens, and, as many of the legislators were known to favor their passage, the Wisconsin Audubon Society, prominent educators, and the better class of sportsmen, were compelled to concentrate every energy in defeating their vicious purpose. This was finally accomplished, but only by a very narrow margin. The first of these obnoxious bills was killed in the state assembly, on April 22, by a vote of forty to forty-six. The remaining bills died natural deaths, in consequence. The adoption of measures forbidding spring shooting in other states will do much to prevent the future resurrection of spring-shooting measures in our own. The Society desires at this time to express its grateful thanks to Speaker L. H. Bancroft, Assemblyman C. H. Dorner, and several other legislators, who proved themselves, at this trying moment, stout champions of the Audubon movement for bird preservation.

The local outdoor bird-study classes were this year conducted by Mr. Frederick Brandenburg, an experienced ornithologist, who very generously offered his services.

Various members of the Society have given talks and lectures during the year before public school audiences, teachers' institutes and women's clubs, with promising results. As usual, a large number of bird Leaflets have been distributed to the state public libraries through the courtesy of the Wisconsin Free Library Commission, and to other educational institutions by the Society itself. If its income were larger, a greater number of the latter might be reached. Such literature and reports as it has received from other state societies has been placed in the care of the University library. The subscriptions to *By-the Wayside*, the official organ of the Society, have increased in number. Under present arrangements, every member will receive the monthly issues of this valuable and instructive publication without additional charge.

The eleventh annual meeting of the Society was held in the lecture hall of the Madison Public Library on Saturday, June 5.—C. E. BROWN, *Secretary*.

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Carried forw'd, \$5,489 70

Carried forw'd, \$5,870 70

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Waldo, Chas. S....	5 00	Whiting, P. W.....	5 00	Zollkoffer, Mrs. O.	
Walker, Miss A. M..	5 00	Whitney, Miss A....	5 00	F.....	5 00
Carried forw'd, \$7,193	20	Carried forw'd, \$7,459	20	Total.....	\$7,984 20

The Report of the Treasurer of the National Association of Audubon Societies

BALANCE SHEET

Exhibit "A"

October 20, 1909

ASSETS

Cash in Farmers Loan and Trust Company.....		\$9,666 81
Furniture and Fixtures.....		251 30
Audubon Boats (five).....		3,210 46
<i>Investments—</i>		
United States Mortgage and Trust Company Bonds guaranteed.....	\$3,000 00	
Bonds and Mortgages on Manhattan Real Estate.....	316,000 00	
Manhattan Beach Securities Company Bonds guaranteed.....	2,000 00	
		321,000 00
<i>Deficit—</i> Amount existing at October 20, 1908.....	9,517 39	
<i>Deduct—</i> Balance from Income Account, per Exhibit "B" ..	877 39	
		8,640 00
Total.....		\$342,768 57

LIABILITIES

<i>Endowment Fund—</i>		
Balance at October 20, 1908.....	\$338,702 00	
Received from Patron and Life Members.....	3,150 00	
		\$341,852 00
<i>Bradley Fund—</i>		
Total contributed.....	1,900 40	
Less amount invested, Taxes, repairs, etc.....	1,615 33	
		285 07
<i>Special Funds—</i>		
Massachusetts Legislative Campaign, 1910.....	500 00	
Reservation Purchase Fund.....	125 00	
Willow Island Fund.....	6 50	
		631 50
Total.....		\$342,768 57

INCOME AND EXPENSE ACCOUNT FOR YEAR ENDED OCTOBER 20, 1909

Exhibit "B"

INCOME—

Members' Dues.....	\$5,700 00
Contributions.....	2,284 20
Interest from Investments.....	16,165 21
Educational Leaflets—Sales.....	680 55
Von Berlepsch Books—Sales.....	128 80
	\$24,967 76

EXPENSES—

Warden Service and Reservations—

Salaries.....	\$1,806 58
Launch Expenses.....	374 98
	2,181 56

Legislation—

Traveling.....	201 95
Expenses.....	44 23
New York Aigrette Amendment.....	35 00
	281 18

Expenses carried forward..... \$2,462 74 \$24,967 76

INCOME AND EXPENSE ACCOUNT FOR YEAR ENDING OCTOBER, 20, 1969, continued

INCOME, brought forward..... \$24 967 76

EXPENSES, brought forward..... \$2,462 74

Educational Effort—

T. G. Pearson, salary and expenses.....	\$2,202 04
E. H. Forbush, salary and expenses.....	2,126 59
H. H. Kopman, salary and expenses.....	458 90
Miss Moore, salary.....	340 00
M. B. Davis, salary.....	300 00
W. L. Finley, salary and expenses.....	1,159 98
Curran & Mead, Press Information.....	1,800 00
Plates and Outlines.....	906 76
Slides and Drawings.....	362 33
Electros and half-tones.....	368 81
BIRD-LORE to Members.....	1,027 90
Extra pages BIRD-LORE.....	437 83
Printing.....	705 68
Newspaper Clippings.....	60 00
Educational Leaflets.....	762 41
Von Berlepsch Books.....	143 45
Lecture and Stereopticon work.....	238 78
Traveling.....	201 95

13,603 41

Southern Office—

Expenses 196 59

State Audubon Societies—

Texas.....	\$50 00
New York.....	33 55
Wisconsin.....	60
New Jersey.....	5 00
South Carolina.....	500 00
South Carolina, Legal Expenses.....	75 00
Mississippi.....	5 50
Connecticut.....	62 86
Virginia.....	26 94
Illinois.....	50
Ohio.....	43
Indiana.....	50
Minnesota.....	64
North Dakota.....	118 75
Louisiana.....	45 00

925 27

General Expenses—

Salary, Chief Clerk.....	\$1,040 00
Salary, Cashier and Bookkeeper.....	776 00
Salary, two stenographers.....	1,092 00
Salary, Junior Clerk.....	352 00
Postage.....	743 97
Telegraph and Telephone.....	97 39
Office and storeroom rent.....	820 02
Stenographic work.....	55 63
Legal services.....	172 16
Envelopes and supplies.....	157 25
Express and cartage.....	92 34
Commissions.....	239 25
Soliciting Memberships.....	243 96
Miscellaneous.....	620 39

6,502 36

Total expenses.....

 \$23,690 37

Balance—Net Income..... \$1,277 39

Deduct—Amount contributed by W. P. Wharton in 1908 (making \$1,000.) now applied to Endowment Fund as Patron..... 400 00

Balance—Surplus, per Exhibit "A".....

 \$877 39

LAWRENCE K GIMSON, CERTIFIED PUBLIC ACCOUNTANT,
82 Wall Street

NEW YORK, October 23, 1909

DOCTORS J. A. ALLEN, AND H. C. BUMPUS,
Auditing Committee,
National Association of Audubon Societies,
141 Broadway, New York City.

Dear Sirs:—In accordance with your instructions, I have made an examination of the books and accounts of the National Association of Audubon Societies for the year ending October 20, 1909, and present herewith the following Exhibits:—

EXHIBIT "A"—BALANCE SHEET, October 20, 1909.

EXHIBIT "B"—INCOME AND EXPENSE ACCOUNT FOR YEAR ENDED OCTOBER 20, 1909.

All disbursements have been verified with properly approved receipted vouchers and paid cheques; all investment securities, with Safe Deposit Company have also been examined and found in order.

Yours very truly,

LAWRENCE K. GIMSON,
Certified Public Accountant.

NEW YORK, October 22, 1909

MR. WILLIAM DUTCHER, President,
National Association of Audubon Societies,
141 Broadway, New York City.

Dear Sir:—We have examined the report submitted by Mr. Lawrence K. Gimson, a Certified Public Accountant, of the accounts of the National Association of Audubon Societies, for the year ending October 20, 1909, which report shows balance sheet as of October 20, 1909, and income and expense account for the year ending on the same day.

Mr. Gimson states, moreover, that he has audited and verified all vouchers and paid checks, and he also reports that all investment securities have been examined and found correct.

We therefore recommend his report for adoption. Very truly yours,

J. A. ALLEN,
H. C. BUMPUS.

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